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THE RECOGNITION OF OCCUPATIONAL DERMATOSES*

C. GUY LANE, M.D.†

BOSTON

THE recognition of occupational dermatoses is a subject that needs review and requires some emphasis. Physicians are still too apt to think that because a person works at a certain job, any eruption he may develop is related to that job. Thus, the implication is that an eruption in a cement worker is due to cement, or that one occurring in a painter is due to turpentine. A physician is likely to be influenced by a worker who states at the first visit, "I got this rash from my job." It is also possible that, by failing to consider all the factors in a given case, a physician may deprive a worker of his just compensation or, on the other hand, permit a worker with a definite nonoccupational dermatosis to receive compensation because of a wrong diagnosis.

The subject is particularly pertinent because of the present emergency. More men and women are being employed in newly created jobs. Therefore, many persons with limited training are at work on defense jobs. They may have been transferred from one job to another that uses substances which, to the workers at least, are new. They may have had some training for the job, but this training has not always concerned the dermatologic hazards, the prevention of skin injury, whether traumatic or chemical, or the care of the skin. The cry is for speed and more speed, and speed always paves the way for carelessness. The emphasis is on planes, tanks, guns and other defense items, and production is the main effort. Therefore, it can be expected that industrial accidents and diseases will increase, and with them will increase the occupational dermatoses, because 65 per cent of all industrial disease, according to figures obtainable at the present time, concern the skin. At present, in Massachusetts, approximately 300 cases of industrial dermatoses are reported each year; no doubt, an equal number or more are not reported. In Ohio, 900 to 1000 cases a year are reported, and even in that efficient state there are undoubtedly more cases. A conservative estimate of 25,000 cases a year in this country can be made, but it is very easy to imagine that this figure will be doubled or tripled under present conditions.

If these figures are considered from the standpoint of disability, the item of "days' work lost" assumes almost alarming proportions. In Massachusetts, for one year, almost 20,000 days were lost because of occupational skin conditions. In Ohio, 39,000 days were lost in one year. Among federal employees, several years ago, 12,000 days were lost. In New York City, 40,000 days were lost in 1934. In a group of my own of 40 shoe workers whose disability was calculated, a total of over 1400 days was lost, the average being 35 and the longest 672 days. The disability from occupational dermatoses can accordingly constitute a real menace to production. Such disability may be partial or temporary, but it may be total and permanent as a result of industrial damage to the skin. It is easy to see that this menace can be as serious as sabotage or strikes in slowing up defense work, especially if trained personnel is affected. It behooves physicians, therefore, to be on the watch for such cases, and to look out for them as correctly and as justly as possible on the basis of all the facts in a given case.

One of the principal aims should be to detect these cases early, and thus to prevent the extension of the process and limit or prevent disability, not only for the good of the individual workmen but also for the sake of production in any particular factory. Early recognition also averts involvement of other workers because if a logical preventive program is carried out there will be a survey of materials and processes with which the workman is occupied, and there will be a change in the process or materials if it is possible, or at least preventive measures may be adopted before other per-

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†Clinical professor of dermatology, Harvard Medical School; chief, Department of Dermatology, Massachusetts General Hospital.

sons are injured in the same way. Early detection gives an opportunity for prompt and proper treatment,— not only for the patient but also for the eradication of important causal factors. Thus, the abnormal condition will clear up more quickly, and the worker will be back on his job sooner.

A great opportunity is offered, in my opinion, to foremen, forewomen, industrial nurses and industrial physicians and surgeons, whether full or part time, to aid in this recognition of occupational dermatoses by early detection of the individual case. A similar opportunity is also offered to the general practitioner of medicine, especially in a manufacturing city. Many patients still prefer to go to their family physicians rather than to the physician or dispensary connected with their particular manufacturing plant. There are also many small shops that do not have any medical service. These foremen, nurses or physicians are all in the first line of defense against such hazards for the skin, and they should be aware of the responsibility for the early detection of *pathologic conditions of the skin for which occupational exposure can be shown to be a major, causal or contributory factor* — these words define well and briefly an occupational dermatosis.

In the dermatologic cases that fall into this group, certain significant items usually aid in the recognition of their status, both in the history and examination. Such items deserve more careful study because they point the way to the successful classification of the individual case. And such consideration of an occupational factor will be required, in all probability, in 15 to 20 per cent of all skin cases.

History

The usual procedure with any new or old case is to obtain a history of the present complaint, and in suspected occupational cases, an accurate history — not only of the existing manifestations but also of the occupation, substances handled, processes, cleansing methods and so forth —is of great value. The primary considerations, in my opinion, are questions on the duration and the site of involvement, both at the outset and subsequently. The duration has little special significance, for some cases may be acute and others chronic. But the site of the dermatosis assumes great consequence, especially if the hands or hands and arms alone are involved. If one is sure that the process is a dermatitis or eczema and not a disease such as lichen planus or erythema multiforme, it is really necessary to exclude an occupational factor as a cause, because the incidence of involvement of these sites is high in cases of dermatitis from occupational causes.

The onset and course of the disease may hold several important clues to occupational causation. The patient may observe that the beginning of the eruption was "due to his work," but the physician should not be too greatly influenced by such a statement. In general, the site of onset is coincident with the site of maximum exposure or trauma. Furthermore, the time relation between exposure or trauma and the onset of the dermatosis should be correct for that particular dermatosis. Thus, an acute dermatitis should appear within a week after the exposure (although usually sooner), whereas a keloid may require several months, and a radiodermatitis a year or more. Another major consideration is the history of the course of the disease. If there is a story of several attacks of a similar type of dermatitis following exposure on return to a job, and remissions following layoffs, vacations or week ends, valuable evidence of an industrial causation is developed.

Somewhere in every dermatologic history, there should be a question on occupation, although the details need to be pursued only in cases that warrant it. In numerous occupations with a high degree of cutaneous hazards (Table 1), the details should be sought. On the other hand, a truck driver may require questioning on the details of his particular job. I have emphasized the need of two histories — one of the disease and the other of the occupational factors. This is usually a time-consuming procedure but usually pays large dividends.

TABLE 1. *Occupations with High Cutaneous Hazards.*

Bakers	Lithographers
Building cleaners	Machinists
Cement workers	Painters
Chemical workers	Photographers
Dishwashers	Shoe treers
Dye handlers	Soda-fountain workers
Electroplaters	Tanners
Gardeners	

Of particular interest in the occupational history are the agents used. Many different agents have been described as causal factors (Table 2), and new substances are constantly being employed in industry. If the patient being questioned is working with substances known to have produced many cases of skin disorder, more careful consideration

TABLE 2. *Industrial Agents Frequently Producing Skin Disturbance.*

Acids	Paints
Alkalies	Petroleum products
Dust	Paints and woods
Dyes	Rubber compounds
Metals	Solvents

should be given to the possibility of an occupational dermatosis.

Attention should be directed not only toward the agents employed in the actual process, but also toward the substances used as cleansing agents during or after working periods (Table 3), for these are often primary or contributing causes.

TABLE 3. *Cleansing Agents Frequently Producing Skin Disturbances.*

Water	Degreasing agents
Alkalies	Naphtha, gasoline and so forth
Strong soaps	Acetone
Soda, soda ash and lye	Turpentine
Bleaching powders	Alcohol and its substitutes
Quick cleaners of various types	Oil
	Kerosene
	Machine oil
	Paraffin oil

Two other questions should be included if any suspicion of occupational causation is aroused. The first concerns the involvement of the skin of other workers at the same job as that of the patient being questioned. Such eruptions may be coincidental, but the matter deserves further consideration. The second question or set of questions should include possible nonoccupational contacts or trauma that might cause a skin disturbance similar to the one presented by the patient. Thus, the questions in a case of dermatitis might cover exposure to poison ivy, painting at home, cementing for a neighbor, part-time work developing photographs and so forth. Such a history casts definite doubt on the occupational process as the sole causative factor.

In any history, dermatologic or otherwise, there should be queries concerning therapy, both external and internal. Numerous drugs may produce eruptions, and occupational or other skin disease is frequently masked, altered or exaggerated by local applications. Twenty-five per cent of all dermatitis may be of therapeutic origin, and it may consequently be difficult to evaluate the original condition of the skin.

In summary, the recognition of an occupational dermatosis depends in part on the careful evaluation of certain factors obtained by questioning — the site of onset, course, time relation, details of occupation, agents handled, cleansing substances used, status of fellow workers and possible nonoccupational contacts.

Examination

In the examination of the patient, certain other factors must be weighed. In the first place, the site or sites of maximum involvement should be noted. In occupational cases, these sites coincide generally with the sites of maximum exposure to a particular substance, and any discrepancy requires careful study.

Secondly, the types of lesions should be noted. A careful inspection should be made of the color, arrangement and so forth, together with such other general examination as is necessary to make a correct diagnosis, if possible. If a definite causal factor is suspected, the dermatosis should in general consist of lesions described in similar cases previously reported. Thus, one does not expect to find in a shoe treer the type of lesions and arrangement seen following contact with poison ivy.

Inspection should also reveal the stigmas of the patient's occupation — that is, the calluses produced by pressure and friction, the stains and pigmentation caused by materials used in his work and so forth. Such findings give additional evidence of the occupation and aid in confirmation of other findings.

At the same time, a healthy suspicion should cause the physician to be on the watch for other skin disease, nonoccupational as well as occupational. The finding of patches of psoriasis on an elbow or the presence of scars suggesting syphilis necessitates a review of other findings.

Further examination by pertinent laboratory work, biopsy, cultures, serologic tests, microscopic study of scales or pus and so forth should be carried out, if necessary.

In cases of dermatitis, patch tests with the suspected material offer a means of identifying the etiologic agent, even though the results of such tests are overemphasized at present. Numerous false-positive and false-negative reactions are reported, perhaps partly from variations in technic and interpretation. Patch tests, by themselves, should be regarded as confirmatory of the history and examination and not as diagnostic. It is necessary that they be properly performed by accepted procedure and correctly interpreted by physicians with adequate training in this field to have the proper value in the estimation of an occupational cause.

Diagnosis

After such a history and examination, the next step is the dermatologic diagnosis, without regard to the occupational factor. In other words, Is the correct diagnosis of the patient at hand dermatitis, carcinoma, lupus vulgaris or lichen planus? If the diagnosis is a disease in which there has been no previously described occupational factor to the best of one's knowledge and belief, it can be said that occupational dermatitis need not be considered. Thus, lichen planus, erythema multiforme, scabies, alopecia areata and so forth can be regarded as nonoccupational dermatoses. If the

condition is recognized as one in which previous cases have been shown to be of occupational origin, some of which are shown in Table 4, the

TABLE 4. *Diseases in Which the Question of Occupational Origin Most Frequently Arises.*

Acne	Actinomycosis
Burns	Anthrax
Calluses	Blastomycosis
Chilblains	Erysipeloid
Dermatitis, acute	Impetigo
Dermatitis, chronic	Paronychia
Eczema	Pus infections
Epithelioma	Syphilis
Folliculitis	Tinea
Keloid	Tuberculosis
Keratoses	
Radiodermatitis	
Ulcers	

decision must be made regarding the diagnosis of an occupational dermatosis and the recognition of the causal factor or factors. It is not enough to make a diagnosis of an occupational dermatosis, — acne, keloid or folliculitis, — for it is essential for the development of proper preventive measures

TABLE 5. *Causes of Industrial Dermatoses.*

Physical	Chemical
Mechanical	Oxidizing agents
Friction, pressure, traction and so forth	Reducing agents
Thermal	
Heat	Infectious
Cold	Bacteria
Actinic	Fungi
Sun	Animal parasites
X-ray and radium	

to detect the cause. These causes are manifold, and much space would be required to list them all. Their wide variation is indicated in Table 5.

In the search for causes, not only is a careful review of the history and the examination essential but much is contributed by a knowledge of previous literature on the subject. It may be necessary to inspect the process, to interview the foreman, chemist, nurse or manager, and to perform patch tests, chemical investigations and bacteriologic and pathological studies to confirm the ultimate cause. In numerous cases, it is desirable to make full use of the facilities of the Laboratory of Dermatoses Investigation of the United States Public Health Service in Washington and the Council on Industrial Health of the American Medical Association for a solution of individual problems.

Diagnostic Difficulties

In discussing this subject, I am aware of the obstacles that present themselves: the language difficulties, the intelligence and co-operation of the patient affected, or rather, the absence of them, the lack of accurate knowledge of the average employee of processes and materials, the long duration of disease before a competent opinion is obtained, the previous and often excessive treatment, the fact that other agents may cause similar manifestations, and the apathy or possibly the dislike of some manufacturers to disclose trade formulas and other secret information.

I am also cognizant of the obstacles in diagnosis for the industrial physician or general practitioner who has had dermatologic training only in his regular medical-school course. There is enough difficulty for the trained dermatologist in many cases. General practitioners see a relatively small number of cases of the same disease, whether it is scabies, lichen planus or lupus erythematosus. It is natural, therefore, that they will not have a familiarity with the atypical and borderline manifestations, and especially the overtreated cases. Moreover, many physicians lack the knowledge of the actual ingredients that the worker is using and of the processes employed.

Furthermore, I am aware of the difficulty encountered in rendering a clear-cut opinion of occupational or nonoccupational liability in every case, for many cases must be classified as "probably" or even "possibly" industrial. In addition, in some states, only certain diseases are listed in a category legally acceptable for compensation. In other states, compensation is granted for complications of occupational dermatoses or for exaggeration by occupation of existing skin disease.

There is thus a definite need for the adoption of more uniform legislation covering this field, for a more systematic review of suspected cases, for the establishment of acceptable standards of definition, criteria and so forth, and for the development of well-standardized preventive measures that can be universally adopted. Wide publicity must be given to the fact that occupational diseases in general are preventable and that the fullest use of accepted medical procedures will definitely aid in the recognition of this group and thus prevent not only disability of the patient but also possible serious disturbance to industrial production.

SUMMARY AND CONCLUSIONS

Emphasis is placed on items in the history and examination that may aid in the recognition of occupational dermatoses.

Early detection is stressed as a most valuable aid in preventive measures.

Some of the causes and manifestations of occupational dermatoses are reviewed, and some of the difficulties in deciding these cases discussed.

The belief is expressed that a more careful consideration of this group of patients will enable physicians to recognize the occupational cases earlier and thus render better service to patients and to industry.

416 Marlborough Street

THERAPEUTIC EVALUATION OF TESTOSTERONE IN PERIPHERAL VASCULAR DISEASE*

SAMUEL B. BEASER, M.D.,† AND THEODORE B. MASSELL, M.D.‡

BOSTON

THE diversity of opinion regarding the value of the numerous forms of therapy in current use for peripheral vascular disease, we believe, is due to the inadequacy of the tests of circulatory function so far utilized.

Walking is a reliable quantitative test of function if judged on the basis of capacity to walk until pain occurs. It is an easily repeated measurement of tolerance and is capable of standardization. It does not involve the use of special apparatus, and it tests muscles that the average elderly patient is accustomed to using — in other words, it constitutes a normal activity for the patients concerned.

Chronic progressive occlusion of the vascular supply to an extremity proceeds in three stages: the long preliminary period free of symptoms, except perhaps absence of pulsations in the dorsalis pedis artery; the interval of intermittent claudication, when the blood flow has been reduced by fully two thirds,[1] which continues for months or years until further substantial reduction in blood supply is obtained; and the final period, which is characterized by trophic disturbances in the skin, rubor and, eventually, skin infection.

The patient usually seeks relief in the second stage. Therapy is generally intended to promote improvement in the circulation of the muscles by vasodilating or other agents, which act presumably by encouraging an increased flow in the collateral vessels. Since the vascular supply to the skin stems from the deep (muscular) vessels, postponement of the superficial-tissue breakdown that leads to gangrene and amputation may be achieved.

Measurement of an increase in the circulation of the deep vessels is not directly appraised by the methods in common use. The oscillometer measures pulsations in the large vessels. The plethysmograph cannot be easily adapted for routine clinical study. The muscle-temperature thermocouple is not useful for the measurement of the necessarily slow improvement that may occur. Skin-temperature measurements and immersion calorimetry deal essentially with changes in superficial vessels, and there is much evidence to indicate a dissociation in the response of deep and superficial vessels to drugs.[2]

The therapeutic agent tested in this study for its effect on circulatory function was testosterone propionate. The drug was first suggested by Arndt[3] in 1939 for the relief of intermittent claudication. This author describes a favorable effect on this condition in 6 men, but the evaluation was based entirely on a general statement by the patient that he felt better. The duration of improvement was not given, and in 2 patients smoking was decreased or eliminated during the period of treatment.

Subsequently, Edwards et al.[4] reported that testosterone produced "marked improvement in the walking ability of all the patients, with delay or abolition of the intermittent claudication." The patients were followed for several months, but no mention was made of other therapeutic procedures that may have been used simultaneously, nor was any objective measure of evaluation used.

In our study, the walking test was performed in a level, unobstructed hospital corridor, which was kept at a nearly constant temperature of 72°F. during most of the year. An increase over this temperature in the summer did not seem to affect the performance of the patients.

They were paced at a constant rate of 88 yards a minute. In only 1 patient, who had definite peripheral arterial disease, was a faster pace necessary to bring on symptoms of claudication. They were asked to indicate, as they walked, the moment when tightness or cramps in the calf muscles appeared, but they continued to walk until the severity of the pain required them to stop. Those patients who at this moderate pace experienced angina pectoris or severe dyspnea before the onset of claudication were excluded from study.

Our series consisted of 6 men between the ages of forty-five and sixty-two years, all of whom had had intermittent claudication for from six months to seven years and were under observation in our clinic most of the time. One patient had thromboangiitis obliterans, and the remainder had arteriosclerosis; 1 of these also had diabetes mellitus. Each patient presented objective evidence of peripheral vascular disease: absent arterial pulsations, and color and temperature changes in the feet. Previous to observation, 2 had ceased smoking, and 2 had not, 5 had had Buerger's exercises, and 4, intravenous 5 per cent saline injections, with no defi-

*From the Departments of Medicine and Surgery, Beth Israel Hospital and Harvard Medical School.

†Assistant in medicine, Harvard Medical School; junior visiting physician, Beth Israel Hospital.

‡Formerly, assistant junior surgeon to the Out-Patient Department, Beth Israel Hospital.

nite evidence of improvement subjectively or objectively.

In each case, a level walking test was performed weekly until three consecutive tests showed similar results. During the initial period of observation, all patients were given intramuscular injections of 1 cc. of physiologic saline solution. All other aspects of the care of these patients were unchanged, such as exercises and the use of tobacco and alcohol.

After a control period of four observations during at least one month, intramuscular injections of testosterone* were started. These were given three times a week — in 2 patients for six weeks, and in the remaining 4 patients for from three to six months. The total weekly dosage varied from 30 to 225 mg., averaging 100 to 125 mg. In addition to the intramuscular therapy, 3 patients were given the hormone by inunction daily for three weeks to a total dose of 50 mg.

In all the cases except one, the objective walking test showed no improvement in spite of occasional assertions of subjective improvement by the patient. This patient did not improve after doses of 15 to 150 mg. a week for ten weeks, but had a slightly increased walking tolerance after five additional weeks with doses of 225 mg. a week. The improvement was so slight that it was not deemed worth while to use such large and costly doses in the remaining patients. Table 1 shows the course of typical patients under this type of therapy.

TABLE 1. *Influence of Testosterone Injections as Measured by the Walking Test.*

SUBJECT	DURATION OF THERAPY	ONSET OF PAIN	ENDURANCE OF PATIENT	DOSAGE OF TESTOSTERONE
	wk.	*trips*	*trips*	*mg./wk.*
CASE 1.	0	3	4	0
	8	2 1/2	3	0
	9	2 1/2	4	150
	11	2 1/2	4	50
	14	2 3/4	4	100
	27	3 1/2	3 3/4	100
	35	3	4	0
CASE 2.	0	1 1/3	2	0
	2	2	2 3/4	0
	4	1 3/4	2	0
	7	1 3/4	2	30
	26	1 3/4	2 1/2	75–100
	31	2	2 1/3	150

*The preparation used, Oreton, contained 25 mg. of crystalline testosterone propionate to each cubic centimeter of sesame oil. This was generously supplied by the Schering Corporation, Bloomfield, New Jersey.

The patients were not told the nature of the medication administered, but were questioned regarding possible effects of the treatment on sexual activity. One claimed an increased libido, but continued impotent.

DISCUSSION

Neither Arndt[3] nor Edwards[4] offered any explanation of the mechanism by which the improvement claimed from the use of testosterone was accomplished. Edwards et al.[5] stated that there was an increase in oxygenation of hemoglobin in the cutaneous vessels of eunuchoids and castrates following the administration of androgenic substance. A possible explanation for the fact that some of their patients reported subjective improvement in walking ability is found in the recent reports that these preparations decrease muscular fatigability in eunuchoids.[6] However, none of our patients with peripheral vascular disease and none of those of Arndt and Edwards exhibited any of the characteristics of testicular insufficiency. It is doubtful whether observations on eunuchoids or castrates can be applied to the normal elderly man.

SUMMARY

Measurement of a patient's ability to walk on a level surface at a given rate until the onset of claudication is a satisfactory method of evaluating peripheral circulatory function in ambulatory patients with peripheral vascular disease.

Using the above test, it was found that testosterone propionate, in dosages up to 150 mg. a week, did not prevent intermittent claudication in the lower limbs of 6 patients with occlusive vascular disease.

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CLINICAL NOTES

HEMORRHAGE FROM A RUPTURED CORPUS LUTEUM*

Report of a Case in a Twelve-Year-Old Girl

Philip S. Foisie, M.D.†

BOSTON

INTRA-ABDOMINAL ovarian hemorrhage in nongravid patients has in recent years become recognized as a fairly common occurrence. Exclusive of cases due to a demonstrable lesion, there are a fairly large number in which hemorrhage of varying degrees occurs from apparently normal ovaries. These patients can be divided into two groups: those with a ruptured graafian follicle and those with a ruptured corpus luteum. The symptoms in these two groups differ chiefly in their relation to the menstrual cycle and in their severity. Rupture of the graafian follicle is a normal physiologic process that occurs in the midmenstrual period and in which hemorrhage is rarely severe. Rupture of the corpus luteum is not physiologic, occurs in the premenstrual period and produces hemorrhage that may attain fatal proportions.

A review of the literature of the last fifteen years shows that there are now several hundred of such cases on record, with an age incidence anywhere during the childbearing period but rarely during the early years of that period. Hoyt and Meigs,[1] in 1936, reported a series of 58 cases, the youngest patient being fourteen years old. In the same year, King and Hawes[2] reported a case in a twelve-year-old girl in whom menstruation had begun one year earlier, at the age of eleven. The occurrence, therefore, of a case of hemorrhage of an exsanguinating degree in a girl of twelve whose catamenia began only a month before seems to be worth reporting to emphasize the necessity of considering this diagnosis at any time after puberty, even when the patient may be regarded as a child rather than a childbearing woman.

Before mentioning the details of this case, I shall review very briefly the normal physiology of ovulation. The ovaries are made up largely of a number of ova, and as any particular ovum matures, it approaches the periphery of the ovary, whose surface becomes prepared for its extrusion by a thinning-out process that reduces its vascularity. Physiologic rupture of the graafian follicle then occurs, with escape of the ovum, constituting ovulation and taking place at about the middle of the menstrual cycle. Usually, only a small amount of serum escapes in this process, but sometimes a mild degree of bleeding also occurs that causes varying degrees of discomfort in the lower abdomen and not infrequently results in an erroneous diagnosis of acute appendicitis. Europeans seem to have more trouble with this condition than Americans: at least, it is talked of a good deal more in foreign literature and is what the Germans refer to as *Mittelschmerz*. Although varying degrees of hemorrhage may take place in this process, such bleeding rarely reaches alarming proportions, and conservative treatment is indicated.

Following ovulation, the ruptured graafian follicle seals up again and develops the yellow luteal cells that give it the name of corpus luteum. If impregnation does not occur, the corpus luteum rapidly degenerates, forming a white scar — the corpus albicans. Rupture of a corpus luteum causes hemorrhage that may reach fatal proportions. This occurs in the premenstrual period, a day or two before the onset of the next menses. Hemorrhage may be so extensive in these cases as to give signs of diffuse abdominal pain, nausea and vomiting, marked abdominal spasm and general evidence of severe blood loss. This picture is usually confused with that of a rupture in an ectopic pregnancy or in the less severe cases with acute appendicitis. The incidence seems to be definitely greater on the right side, and this, of course, adds to the confusion with appendicitis; moreover, symptoms are often referred to the right side even when the left ovary is involved.

The following case is interesting because the patient was a child whose catamenia had begun just one month before her illness. This patient had had only one previous corpus luteum that could have ruptured, and is therefore only one month removed from the earliest possible occurrence of the accident physiologically.

Case Report

F. O'H. (B.C.H. 939366), a 12-year-old girl, was admitted to the hospital on May 7, 1939, with a complaint of abdominal pain. The first catamenia began 1 month before admission and lasted 5 days, with considerable cramps. The second period was due at the time of admission.

The patient had had measles, whooping cough and scarlet fever. The tonsils and adenoids had been removed 6 years previously.

The patient stated that the evening before admission she had a heavy supper consisting of baked beans, frankfurters, pickles, cake and milk, and that she awoke in the middle of the night with abdominal pain and nausea; she vomited about 4 a.m. and continued to be nauseated, and vomited during the rest of the night and the next morning. When she entered the hospital in the afternoon, it was stated that there were no abdominal signs. Examination of the urine showed 10 to 12 white blood corpuscles per high-power field, and the patient was admitted on a medical service with a diagnosis of pyelitis. She continued to have abdominal distress and nausea, and gradually during the latter part of that day, abdominal

*From the Fourth Surgical Service, Boston City Hospital.

†Assistant in surgery, Tufts College Medical School; assistant to visiting surgeon, Boston City Hospital.

signs became more apparent. Toward midnight, surgical consultation was requested, and I saw her about 1 a.m. The abdomen was distended throughout, with considerable spasm and marked tenderness in both upper quadrants, particularly the left. In addition, the patient presented the picture of acute blood loss. The blood pressure was 90/54. The red-cell count was 2,400,000 with a hemoglobin of 45 per cent, and the white-cell count was 17,000, with a shift to the left. The nonprotein nitrogen was 48 mg. per 100 cc. Examination of the urine showed an acid reaction, a specific gravity of 1.017, a + test for albumin and 10 white cells per high-power field. The vomitus showed a ++ test with benzidine.

Because of the unmistakable evidence of severe blood loss, the absence of any history of trauma and, most particularly, the onset in the premenstrual phase, a preoperative diagnosis of ovarian hemorrhage was made. The patient was given a 500-cc. transfusion, following which it was apparent that bleeding was continuing, and she was operated on about 3 a.m. under cyclopropane anesthesia. When exposed, the peritoneum was distended with dark blood, and the distention was so severe that this layer could not be picked up with an ordinary mouse-tooth forceps. When the abdomen was opened, large clots and free blood burst forth, thus giving evidence of old and fresh bleeding. The right tube and ovary were normal. The left ovary had been split wide open, so that only a shell remained. There was active bleeding from the inner surface of this shell. The ovary was clamped and removed, and the abdomen closed without drainage after all clots had been removed.

On the day following operation, the temperature rose to 104°F.; the pulse was 160, and the patient appeared to be moribund. She was put in an oxygen tent, two additional transfusions were given, and she promptly rallied. On the 3rd day after operation, she appeared to be definitely recovering. She made a normal convalescence and left the hospital in excellent condition on the 9th postoperative day.

This case could hardly have been distinguished preoperatively from a ruptured tubal pregnancy, except of course that the youth of the patient made this diagnosis improbable. It should be noted that Cullen's sign was not present, although the abdomen was extremely distended with dark clotted blood.

Summary

The physiologically earliest case on record of intraperitoneal hemorrhage from ruptured corpus luteum is reported. It is emphasized that this condition must be considered in all females in the childbearing period who present acute abdominal signs.

Rupture of the graafian follicle, which is a normal physiologic process occurring in the midmenstrual period, may be accompanied by mild bleeding and may be confused with appendicitis.

Hemorrhage from a ruptured corpus luteum occurs in the premenstrual period and may be accompanied by severe hemorrhage, which may simulate almost any diagnosis connoting an acute condition of the abdomen, most commonly acute appendicitis and rupture in an ectopic pregnancy.

520 Commonwealth Avenue

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THE USE OF SULFANILAMIDE FOR THE TREATMENT OF AN INFECTION DUE TO MICROAEROPHILIC STREPTOCOCCI

Report of a Case

Alfred Hurwitz, M.D.* and Edwin L. Prien, M.D.†

BOSTON

BURROWING subcutaneous infections caused by microaerophilic streptococci constitute a clinical entity characterized by extensive destruction and undermining of the skin and subcutaneous tissues. Topical antiseptics were found useless until Meleney[1] developed the zinc peroxide method of therapy.

The local use of chemotherapeutic agents has been described by Jensen, Johnsrud and Nelson[2] and Key and Frankel[3] and has been employed with good results in the treatment of war wounds in England. Schneider[4] successfully treated an undermining infection of the right thigh due to *Staphylococcus aureus* and microaerophilic streptococci with hydrogen peroxide and sulfanilamide locally. Meleney and Harvey[5] reported favorable but not striking results with the use of zinc peroxide locally and sulfanilamide orally in the treatment of burrowing infections caused by *Streptococcus haemolyticus* of the microaerophilic type.

In the following case, the zinc peroxide method failed, but sulfanilamide powder rapidly effected a cure.

Case Report

First admission. J. W., a 48-year-old man, was admitted on July 22, 1940, because of multiple draining sinuses in the left groin. The condition began as a small "pimple," which had been incised. A purulent discharge developed, and multiple sinuses soon formed. The condition became progressively worse. On admission, the patient presented an indurated area in the left groin, and the perineum contained multiple sinuses from which a profuse purulent discharge issued.

*Assistant in surgery, Harvard Medical School; assistant in surgery, Beth Israel Hospital.

†Associate neurologist, Newton Hospital; assistant neurologist, Boston Lying-in Hospital.

Cultures from the wound revealed diphtheroids, a non-hemolytic streptococcus, *Staphylococcus albus* and *Escherichia coli*. The Frei test for lymphogranuloma inguinale was questionably positive on one occasion, but negative when repeated. No tubercle bacilli or fungi were found. The blood Hinton and Kahn reactions were negative.

The clinical course was characterized by a low-grade fever not exceeding 100°F. The red-cell count was 3,500,000, and the white-cell count averaged 20,000. After 5 days of oral sulfanilamide therapy, extensive incision and drainage were performed. Boric acid dressings and irrigations were used postoperatively, and the wound gradually healed, so that after 55 days it was approximately half closed and covered by healthy granulation tissue.

The patient was discharged to his home under the care of a nurse, who continued the boric acid dressings. After 3 weeks, she noted that the wound failed to improve.

Second admission. When readmitted on October 31, the patient appeared chronically ill. The wound was covered with a dull-gray granulation, a purulent exudate escaping from beneath the skin margins. Undermining extended over a wide area from side to side, beginning at the left anterosuperior iliac spine and extending to the right beyond the right rectus abdominis muscle (Fig. 1) and from

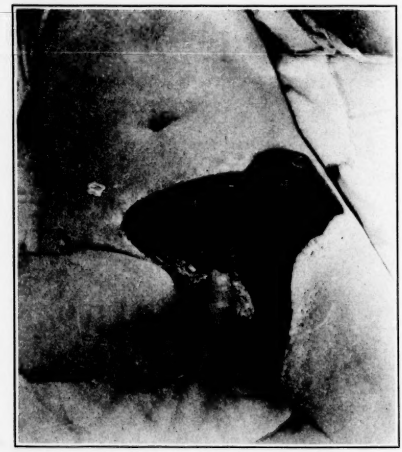

FIGURE 1. *Wound after Radical Excision of Overlying Skin and before Sulfanilamide Therapy.*

above downward beginning about 6 cm. below the umbilicus and extending over the medial aspect of the left thigh, including the area of the adductor canal and the tissue in the fold between the thigh and the scrotum as far back as the junction of the scrotum with the perineum. The process had also worked its way over the symphysis pubis in the midline and had invaded the areolar tissue between the symphysis and the dorsum of the penis so as to lay bare the sheath of the corpus spongiosum. A deep recess was formed in this way.

Laboratory data revealed a white-cell count of 18,300, a red-cell count of 3,470,000 and a hemoglobin of 58 per cent. Culture from the wound showed *Pseudomonas aeruginosa* (*Bacillus pyocyaneus*) and, for the first time, a microaerophilic hemolytic streptococcus.

A radical excision was made with the electric cautery. The overhanging skin margins were excised back to healthy tissue except in the penile area, where little could be done except to widen the entrance to the recess. Both spermatic cords were uncovered. There was evidence of burrowing beneath the left cord, but no excision was made. In its widest extent, the wound measured about 28 cm. transversely. Most of the skin and subcutaneous tissue

FIGURE 2. *Wound about Six Weeks after Sulfanilamide Was Employed Locally and about Four Weeks after Grafting.*

of the abdomen below the level of the umbilicus and of the medial aspect of the thigh over the adductor canal was removed. The pendulous portion of the penis sagged somewhat because its supporting tissues had been cut away, but the spermatic cords served to stabilize the penis and anterior scrotum.

Zinc peroxide dressings were applied daily, with considerable improvement at first. After several weeks of this treatment, it was found that the zinc peroxide was not being prepared according to the specific directions of Meleney. This was remedied, but the lesion did not improve. The granulations became gray, and there was evidence of further burrowing of the process into the tissues about the left femoral artery in the groin. Anaerobic cultures were made through the courtesy of Dr. Champ Lyons, of the Massachusetts General Hospital, who reported that the hemolytic streptococcus did not belong to Group A, B or C of Lancefield and was therefore not likely to respond to sulfanilamide therapy.

On December 24, a spontaneous perforation of the left femoral artery occurred about 5 cm. below Poupart's ligament. Prompt action by an intern, who placed a clamp over the vessel just above the perforation, saved the patient's life. The artery was exposed with some difficulty because of the surrounding granulation tissue and was securely ligated. Transfusion of 1000 cc. of citrated blood from the hospital blood bank was given soon afterward.

The perforation had occurred above the junction of the profunda artery with the femoral, and the leg became cold rapidly. Paravertebral novocain block was not attempted because of the precarious condition of the patient. Fifteen hours after the accident, a line of demarcation appeared at the level of the mid-dorsum of the foot.

On the following day, the wound was sprayed with 2 gm. of sulfanilamide powder. This was repeated daily. Improvement was noted in the wound 24 hours after the first application of the powder. The granulations became red, and the wound closed in rapidly. After 2 weeks of sulfanilamide therapy, the wound was covered with pinch grafts, which were sprayed with sulfanilamide powder 48 hours afterward. Complete epithelialization was achieved after 6 weeks (Fig. 2).

On January 22, 1941, an open amputation of the toes and heads of the metatarsals of the left foot was performed because of gangrene and low-grade infection, and 2 gm. of sulfanilamide powder was sprayed into the stump tissues. A plaster-of-Paris shell was applied to immobilize the extremity. The foot dressing was left untouched for 9 days. Thereafter, the stump was sprayed with sulfanilamide powder about three times weekly. Sulfathiazole, 4 gm. daily, was started 2 days before the amputation was done and continued for 15 days. Thus, the patient received sulfanilamide locally in the wound and sulfathiazole by mouth coincidentally. Convalescence was uneventful except for a pressure ulcer on the heel.

The patient was discharged improved on February 26. Since then, he has made steady progress.

Summary

A case of infection due to a hemolytic streptococcus of the microaerophilic type and treated successfully with sulfanilamide locally after zinc peroxide therapy had failed is reported.

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MEDICAL PROGRESS

PHYSICAL THERAPY FOR DISEASES OF THE NERVOUS SYSTEM

ARTHUR L. WATKINS, M.D.*

BOSTON

THE treatment of patients with disorders of the neuromuscular apparatus constitutes a large proportion of the practice of physical medicine. The type of treatment used depends on the symptomatology present rather than the etiologic agent, since there are no specific curative physical measures. Consequently, diseases producing similar clinical symptoms and signs are grouped together, and the applicable physical-therapeutic measures outlined. The Kenny method of treatment of infantile paralysis has received so much publicity and interest that it is considered separately in more detail.

Kenny Treatment of Poliomyelitis

The National Foundation for Infantile Paralysis has recently sponsored a course in physical therapy based on the Kenny method of treatment of infantile paralysis in the acute stage. This was given in Minneapolis by Drs. Cole, Knapp, Pohl and others at the University of Minnesota. Sister Kenny and her associates demonstrated their method of treatment, and the original cases treated by her in this country were examined. This report is based on information obtained through this course and from the recent literature.[1-5]

Before the results of the Kenny method are discussed, the traditional treatment of poliomyelitis, although not standardized, will be briefly outlined for the sake of comparison. The accepted opinion has been that, in poliomyelitis, flaccid paralysis of muscles occurs from destruction of the anterior-horn cells. In some cases, one group of muscles is thought to be more affected than its antagonist, so that the weaker muscles tend to be stretched by the pull of the stronger ones, with resulting deformities. The general principle of treatment is rest of the weak muscles by immobilization with splints designed to keep the stronger muscles stretched and to prevent tension on the weaker ones. Local applications of heat may be given one to three times a day in the acute stage to painful tender muscles. There is great variation in different institutions in the duration of the immobilization period. It may extend as long as eight weeks,

Reprints of articles in this series are not available for distribution, but the articles will be published in book form. The current volume is *Medical Progress: Annual, 1940* (Springfield, Illinois: Charles C Thomas Company, 1941. $4.00).

*Assistant in medicine, Harvard Medical School; director of the Physical Therapy Department, Massachusetts General Hospital.

or in some cases, passive and active motion may be allowed from the beginning. When muscles are no longer tender, a detailed, functional muscle examination is done, and splints are adjusted to protect weaker muscles. Muscle re-education, which is then begun, consists of exercises designed to strengthen the weaker muscles with some active and passive painless stretching of the tight contracted muscles. This muscle training may be done on a table or under water, the splints being maintained between treatments.

The Kenny method of treatment is based on different concepts of the symptomatology and the factors that lead to the development of deformities. Sister Kenny admits that there will be a certain variable percentage of patients with a residual flaccid paralysis of one or more extremities. This is a result of complete anterior-horn-cell destruction, for which there is no known cure, and she does not claim cures. Her treatment is directed toward another condition, which she calls muscle "spasm." This symptom is thought to be of the utmost significance because, if it is not treated early, contracture, fibrosis, atrophy and loss of function result. This so-called "spasm" consists in pain, tenderness on pressure, constant hyperirritability, particularly on stretching, and, in some cases, visible fasciculation. After several weeks, muscles that have been thus affected and not treated properly exhibit contracture, fibrosis and atrophy. Her term "spasm" refers in a general way to these conditions, and is misleading if interpreted according to accepted usage.

She has further observed that, in the majority of cases, the posterior muscles of the neck, trunk and lower extremities are more affected by "spasm" than the anterior muscles with antagonistic action. She believes that the antagonists of the muscles with "spasm," if treated in the traditional manner, become lengthened and atrophied from disuse, and finally, that power of voluntary contraction is lost. She designates such a functionally paralyzed muscle as "alienated." She also speaks of it as "non-paralytic," meaning that if the "spasm" of its antagonist is released and it is allowed to regain its proper resting length it may be made to function by proper stimulation and re-education. She has learned to distinguish a truly paralyzed muscle from an "alienated" one by passively stretching the muscle repeatedly a few times within a small range of motion; then, by careful observation, a functionally paralyzed muscle will be seen to develop tension so that its tendon will stand out beneath the skin. One might explain this by the assumption that the myostatic stretch reflex had been thus elicited.

A third factor leading to muscular dysfunction has been described by Sister Kenny and called "inco-ordination." This consists in the substitution of accessory muscles or even antagonists for the proper prime movers of a joint. Individual muscles are also said to contract improperly in sections rather than through their full length, and again this is spoken of as "inco-ordination." This phenomenon, I believe, is at least in part generally recognized to occur whenever there is attempted motion of a joint by partially paralyzed muscles, particularly if such motion is painful, and also following immobilization.

The Kenny method of treatment aims to eliminate or correct these three factors leading to deformity and impaired movement. The muscle "spasm" must be treated as soon as the diagnosis is made. A delay of as little as three or four weeks may seriously compromise the results. Treatment consists in the application of hot packs of a measured size to fit muscles without immobilizing the joints. These woolen packs are immersed in boiling water, wrung out twice through a tight wringer at the bedside, and applied quickly to the involved part. The pack is then rapidly covered with oiled silk and a layer of dry flannel. The packs are changed every fifteen minutes if "spasm" is acute — otherwise, every two hours for a twelve-hour period each day. "Spasm" is usually relieved within a week by such treatment, but packing is continued for weeks or months to any muscle exhibiting contracture or shortening. Although the original temperature is high, there is rather rapid cooling, and at the end of two hours there is probably a tendency for the body to heat the pack. This is in reality, then, a type of contrast therapy.

The patient is placed on a firm mattress with boards beneath and a space at the foot of the bed so that the heels do not rest on the mattress. A footboard is provided, but the feet are not allowed to touch this so long as there is any "spasm" of the gastrocnemius muscles; later, the feet are placed firmly against the board, with pressure, to stimulate the standing reflexes.

No active or passive movements that cause any "spasm" or pain are allowed. When the "spasm" is relieved, only passive motions are started while the patient is still in the packs, and the muscles are said to be "stimulated" by such motions. One might interpret this physiologically as setting up a barrage of proprioceptive impulses to facilitate the motor pathway and proper pattern of response. Active motion or muscle re-education begins only when "spasm" has been relieved. This may be within a week in some cases, whereas in others, residual "spasm" in some muscles may require hot packs for months.

The Kenny system of muscle re-education emphasizes the isolated action of certain important muscles for each joint motion. The patients are taught

exquisite control of agonists and antagonists so that smooth rhythmical motions are obtained. There is no effort to strengthen individual muscles by resistive exercises, but strength is increased by repeated co-ordinated movements. All the patients I saw in Minneapolis were beautifully trained in the performance of these motions and were flexible to a degree rarely seen in average normal persons.

The use of the respirator has been abandoned on the theory that the difficulty in breathing is due to the painful "spasm" of the pectoral and intercostal muscles, and with proper care of the airways and relief of the "spasm" by hot fomentations, spontaneous breathing is regained. Patients who do not respond to this and have complete paralysis or bulbar paralysis are not helped by the respirator in any event. The respirator precludes the use of hot packs and tends to increase the "spasm" by stretching the painful muscles. Careful nursing is particularly needed in these cases, and packs may be necessary during all waking hours. Moving pictures have demonstrated the effective relief of such "spasm" by packs and subsequent recovery. The contrast between patients treated by respirator and those treated by the Kenny method six months later is remarkable and the best argument for the latter treatment.

The most convincing evidence available at present in favor of the theory that untreated muscle "spasm" leads to contracture deformities is a comparison of the Kenny-treated patients with others in the same epidemic treated early by immobilization without packs. Whereas in the first group there was complete freedom of motion in all joints through a normal range, in the latter, a mild or marked degree of stiffness and contracture could be demonstrated, particularly of the posterior muscles of the back and lower extremities.

The nature of this muscle "spasm" or its mechanism of production is unknown, and at present no clinical or experimental studies have been completed. One may speculate on various possibilities. There may be a direct action of the virus or a toxin on the muscles, hyperirritability of affected anterior-horn cells, hypersensitivity to acetylcholine due to denervation, acetylcholine contracture, ischemic contracture or protective reflex spasm to avoid painful motion. The clinical impression that irreversible changes may occur if the patient is untreated for three weeks warrants investigation. One type of study that is easily carried out is electromyography. The most recent patient available in our clinic is being studied by this method. The onset of this patient's poliomyelitis was four months ago, and he now has partial paralysis of one shoulder girdle and upper arm. He was treated with an airplane splint and daily physical therapy in the usual manner. The biceps, trapezius and pectoral muscles are now slightly shortened and tense, and occasionally show involuntary fasciculation. In maximum position of relaxation, the electromyographic tracings show marked electrical activity. This was lessened by thirty minutes of diathermy, according to a later observation. Some objective evidence that there is abnormal electrical activity in a muscle with "spasm" following poliomyelitis is thus demonstrated, although the mechanism is not explained.

The apparent paralysis or "alienation" of antagonistic muscles may be due to inhibitory pain reflexes, which are well recognized by physiologists. Immobilization is known to lead to atrophy and not infrequently to temporary loss of voluntary function. There may be, in addition, some actual weakness owing to partial anterior-horn-cell destruction. This should be ascertained in the future by study of electrical excitability and action potentials.

In one old case of infantile paralysis with a foot drop and an anterior tibial muscle rated as "zero," I stimulated this muscle with a faradic current, obtaining an excellent contraction. This tends to corroborate the Kenny theory that some of the paralysis observed is not due to anterior-horn-cell destruction.

Investigations are indicated to study the effect of hot packs and other forms of therapy on the nerves, muscles and circulation and to determine the most efficient method of treatment. The ritualistic tendencies of Sister Kenny are not conducive to this important research.

The Kenny method of muscle re-education seems an excellent one. The emphasis on stimulation of proprioceptive impulses as an aid to normal co-ordinated motion and control of relaxation and contraction of antagonists is probably on sound physiologic ground and much more so than immobilization with arrest of the flow of such impulses.[6] Further study on this point may also evolve superior methods.

Results

It is extremely difficult to evaluate statistically the results of treatment in different groups of patients with poliomyelitis because of the variability in the extent of paralysis that is to be expected. Eighty-four patients in the early stage have been treated in Minneapolis by the Kenny method. Of these, there are residual paralyses in ten lower and two upper extremities. Although all patients showed involvement of the neck, back and hamstrings, in no case has there been residual trunk involvement. The most striking feature on observation of these patients is the ease and co-ordination of movement and the remarkable suppleness.

None of the familiar contracture deformities are seen, and the condition of the skin, subcutaneous tissues, muscles and joints in the extremities with paralysis is better than that in most cases, as judged by inspection and palpation. Although no splints or supports are used while "spasm" is present, they are not objected to after the period of convalescence. No deformities are observed because of this lack of immobilization. The comfort and morale of patients under treatment are impressive.

Conclusions

The Kenny treatment of poliomyelitis is not based on any new theory concerning the disease, but is essentially symptomatic treatment. Emphasis is placed on overcoming muscle pain, tenderness, hyperirritability and contracture. This is not done by immobilization, but by intensive *early* application of hot packs of a specified nature. As a result of this therapy, Sister Kenny has been able to start muscle re-education within a few days or weeks. Her system of re-education employs stimulation of proprioceptive impulses and training in co-ordination of individual muscle actions. Stiff joints, muscle contractures and disuse atrophy are largely eliminated when this treatment is started within the first two weeks or, preferably, as soon as diagnosis is made.

The functional results appear to be equal or superior to those by any known method of treatment. Although residual flaccid paralysis is not eliminated, a definite therapeutic contribution has been made.

Sister Kenny's attempted physiologic explanations in general have not been accepted. Clinicians and physiologists must further study neuromuscular mechanisms in this disease to place treatment on a rational basis and to determine the optimum methods.

Peripheral-Nerve Injuries and Peripheral Neuritis

Physical therapy physicians are frequently called on to aid in the diagnosis and prognosis of nerve injuries by special electrical examinations. The electrical excitability of muscles and nerves may be determined to give information concerning the degree of nerve injury to detect early signs of regeneration. The response to galvanic and faradic stimulation is the familiar test used, and the presence of a typical so-called "reaction of degeneration," as described by Erb, indicates a severe nerve injury. It is impossible, however, to predict that actual loss of continuity has occurred by a single examination of this type. One may have to wait for long periods to allow for possible spontaneous regeneration. Any test that will reveal regeneration at an early date is then of clinical value. The return of motor function is the most reliable sign of recovery.[7] Although sensory changes may appear earlier, they are sometimes misleading because of overlap of sensory distribution from adjacent nerves. Tinel's sign may often be present in cases without regeneration. It has also been shown that the return of response to faradic stimulation may follow return of voluntary function.[8] Recently, quantitative studies of electrical excitability by use of stimulating currents of measured strength and duration have been found to be of practical value.[9] By repeated determination of strength-duration curves in affected muscles, the presence or absence of regeneration was detected before being noted by any other test.[9]

Proper splinting is essential in the care of peripheral-nerve injuries. If the nerve has been sutured and contains motor fibers, the splint should prevent tension on the suture line. The muscles supplied by the injured nerve should be protected from the pull of their antagonists, and as much free active use as possible should be allowed. Harmer[10] has described excellent splints for use in injuries of the wrist and hand. Heat and massage are indicated to improve circulation and thus lessen passive congestion and fibrosis. Great care must be taken in the application of heat to an area with impaired sensation. Diathermy is contraindicated because of the danger of burns. Immersion in warm water and application of radiant heat are simple, effective methods that have the added advantage of safe use in the home, with proper instructions. In massaging denervated muscles, one should employ only gentle stroking and kneading motions, with great care not to injure the delicate vessel walls and muscle fibers. Limited passive movements avoid undue stiffness of joints. Supervised graded active exercises are the most important aids in the recovery of muscle strength.

The value of electrical stimulation of denervated muscle to lessen atrophy and hasten regeneration has not been settled either clinically or experimentally. The studies of Chor et al.[11] on monkeys and Molander and Steinitz[12] on dogs indicate that electrotherapy adds little of practical value. Fischer,[13] working with rats, used more intensive stimulation and did diminish the degree of atrophy. More recently, Gutmann and Guttmann[14] repeated similar experiments on rabbits and continued their study to cover the period of regeneration. They found that daily stimulation with an interrupted galvanic current for fifteen to twenty minutes resulted in no difference in the degree of atrophy during the first two weeks. Subsequently, the treated muscles atrophied less and showed better excitability with stronger contractions. Al-

though the time of return of voluntary function was not affected, the strength and weight of muscles increased with greater rapidity, and this difference could be appreciated two months after the first return was noted. Biopsies showed larger muscle fibers and better striation. The clinical impression of many physicians has been that electrical stimulation is beneficial at least in maintaining the muscles in a receptive condition to the return of nerve fibers. A critical analysis of the clinical effects of electrical stimulation seems of definite value. The technic of stimulation commonly used may not be most advantageous. Some evidence has been presented by Liebesny[15] that the progressive Leduc current is the most effective stimulus.

Electrical stimulation has been used more routinely in facial-nerve paralysis than in any other peripheral-nerve disorder. This may be because people are more concerned with appearance of the face than other portions of the body. The evidence for its value is largely that of clinical impression. Principles of treatment for any flaccid paralysis apply to facial muscles. Splinting, with either adhesive tape or insulated wire, extending from the corner of the mouth to the ear prevents overstretching from pull of the opposite side and of gravity. Local heat with an infrared lamp and gentle stroking improve nutrition and muscle tone. Electrical stimulation, if used, should be obtained with either an interrupted galvanic or an alternating current, such as a faradic or sinusoidal current. The latter is preferable if the excitability of the muscles is sufficient to allow contractions; if not, the galvanic current must be used. Repeated contractions are stimulated to the point of fatigue. In cases in which the facial nerve has been more severely affected, a period of approximately three months will elapse before the first signs of regeneration are noted. In these cases, it has been observed that recovery is never complete. The regenerating nerve fibers apparently divide in such fashion that, instead of allowing individual action of different groups of muscles, the entire facial musculature tends to contract as a whole. There is also spontaneous fasciculation, and a tendency to contracture. The treatment at this stage of recovery should be directed toward muscle re-education to acquire symmetric facial movements. Measures to ensure relaxation of muscles rather than stimulation are indicated. The simple application of local heat is beneficial, as is skillfully administered, sedative, stroking massage. Heavy massage and electrical stimulation should be avoided in the presence of spasm and abnormal associated movements.

In the physical therapy of peripheral neuritis, the same principles apply as in the treatment of peripheral-nerve injuries. Usually, less rigid attention is paid to immobilization with splints and other appliances in view of the fairly good prognosis ordinarily given this disease. In some cases, pain is a distressing symptom and difficult to relieve. Infrared radiation frequently gives some temporary relief. Fever therapy has been used with apparent benefit in a few severe cases.[16]

Spastic Paralysis

A great variety of pathologic processes may result in spastic paralysis. Hemiplegia following a cerebrovascular accident or cerebral trauma is a familiar clinical syndrome, and definite improvement in function can be expected in most cases from proper physical measures.

Traumatic, neoplastic, degenerative and infectious spinal-cord lesions may produce spastic paralysis of one or more extremities. The treatment is essentially the same in these cases as in the cerebral ones. If there is marked sensory involvement as well, some alteration in treatment is necessary. When physical therapy is first started, there may be a complete flaccid paralysis, which gradually changes to a partial spastic paresis. During the flaccid period, stimulative massage and passive exercises may improve the condition of the extremities. With the appearance of spasticity, however, stimulative massage should be avoided and only mild stroking or very gentle kneading used, since the muscles are hyperirritable and spasticity may be increased and thus lessen function. Local heat either from a radiant source or from the use of hot baths, locally or generally, is of some value in reducing spasticity. Muscle re-education is the most vital procedure. Patients must be taught how to acquire maximum relaxation of the spastic muscles and to attain co-ordinated movement. Each case varies in the degree of involvement, and exercises must be adjusted accordingly. There is a tendency for flexion contractures to occur, and the use of night splints aids in their prevention. Mild passive stretching also helps to prevent joint stiffness. To obtain synchronous motions of several extremities and in acquiring skilled movements, occupational therapy is exceptionally valuable.

The treatment of infantile cerebral palsy has been elaborated in some detail by Phelps[17] and others,[18, 19] and is not discussed here. The general principles of treatment as outlined above are employed in these cases.

Ataxia

Sensory loss from involvement of cerebral centers or spinal-cord tracts may be the most disabling feature in some cases of hemiplegia, posterolateral

sclerosis accompanying pernicious anemia, tabes dorsalis, multiple sclerosis and Friedreich's ataxia. In these cases, attempts are made to improve coordinated movement by special muscle re-education. Emphasis is placed on gaining control of position of the extremities through visual pathways, since the normal proprioceptive impulses are lacking. Such exercises have been outlined in some detail by Coulter.[20] When there is spasticity as well as diminished sensation, the measures described for its treatment may be combined. With proper instruction and supervised practice, the patient should learn to carry on a program of home therapy to obtain the best results. In diseases with a tendency to progressive loss of function, such as Freidreich's ataxia and multiple sclerosis, elaborate expensive programs should be avoided, for such treatment cannot affect the course of the disease.

Miscellaneous Conditions

Patients with muscular dystrophy, myasthenia gravis, myotonia, periodic paralysis and progressive muscular atrophy are sometimes subjected to physical therapy, including electrical stimulation and exercises. There seems to be no rational basis for such measures. The only physical agents of value are rest and instruction in good body mechanics. Mild massage is probably harmless, and in some cases of progressive muscular atrophy may be of definite psychotherapeutic value and tends to improve impaired muscle circulation. Conceivably, the extent of fibrillation might be reduced by local heat and sedative stroking, with a consequent delay in atrophy, but no effect on the neurologic lesion can be anticipated.

Backache and pains referable to other joints are frequent complaints of patients with paralysis agitans. The local use of heat is of value in the temporary relief of these symptoms. Such a simple remedy, which may be repeated frequently in the home, may be very comforting. Since these patients tend to remain immobile in a sitting position, they are greatly handicapped by their rigidity when they attempt to move. Supervised therapeutic exercises, including rhythmical motions or the use of music, may distinctly improve muscular performance.[21]

Hydrotherapy has a recognized place in the treatment of psychiatric conditions. A new edition of Wright's[22] textbook on hydrotherapy covers the subject thoroughly.

Electric-shock treatment is the newest development in physical treatment of patients with manic-depressive psychoses and dementia praecox. The latest reports[23–26] agree largely with those previously reviewed[27] in that the best results are obtained in depressed patients. A report on a subconvulsive reaction to electric shock in a normal subject is of interest.[28] The extent of brain damage that may result from this treatment is still indeterminate because of lack of available material for study.

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MASSACHUSETTS MEDICAL SOCIETY

PROCEEDINGS OF THE ONE HUNDRED AND SIXTY-FIRST ANNIVERSARY

May 25, 26 and 27, 1942

THE one hundred and sixty-first anniversary of the Massachusetts Medical Society was observed in Boston on Monday, Tuesday and Wednesday, May 25, 26 and 27, 1942, at the Hotel Statler.

Fifteen hundred and fifty-six physicians and one hundred and twenty-three ladies were registered.

Monday, May 25

The annual golf tournament, under the chairmanship of Dr. Roy J. Heffernan, was held on Monday afternoon at the Commonwealth Country Club. There were twenty-four entries. The winners were as follows:

Low net (Burrage Bowl) — William R. Hill
Second low net — Hollis L. Albright
Third low net — Allen R. Barrow
Low gross — John J. Grinold
Second low gross — David P. Dutton
Third low gross — Roy J. Heffernan

The supervising censors met at 5:00 p.m. in the Hancock Room.

The Cotting Supper was served to 209 councilors in Parlors A, B and C at 6:00 p.m. The annual meeting of the Council was held in the Georgian Room at 7:00 p.m.

Tuesday, May 26

A general clinical meeting was held in the Georgian Room in the forenoon under the co-chairmanship of Dr. Cadis Phipps and Dr. Edward J. O'Brien, Jr. The attendance varied from 250 to 600.

The one hundred and sixty-first annual meeting of the Society was held in the Georgian Room at 11:00 a.m. Dr. Ober, president of the Massachusetts Medical Society, presided. The attendance was about 650. The Annual Oration, "Some Remarks on Therapy for Anemia," was delivered at the close of the meeting by Dr. William B. Castle. During the course of the annual meeting, Dr. Ober introduced Dr. Forrest B. Ames, of Bangor, Maine, the only representative from other state societies present.

The annual luncheon was served in Parlors A, B and C to 190 fellows.

A clinical meeting was held in the Georgian Room from 2:00 to 5:00 p.m. under the co-chairmanship of Dr. George Leonard Schadt and Dr. Ralph R. Stratton. The attendance was 600.

There was a reception and tea for the ladies in the Salle Moderne at 3:30 p. m. There were 62 ladies in attendance.

The annual dinner was held in the Georgian Room, at 7:00 p.m., with 506 in attendance. Dr. Frank R. Ober presided. Reverend Henry M. B. Ogilby pronounced the invocation. Dr. Frank H. Lahey, president of the American Medical Association, and Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, were the speakers. The Shattuck Lecture, "Medicine and Air Supremacy," was delivered immediately after the annual dinner by Dr. John F. Fulton, of New Haven, Connecticut.

The ladies' dinner was held at the Copley-Plaza at 7:30 p.m. There were 39 in attendance.

Wednesday, May 27

There was a general clinical meeting in the Georgian Room from 9:00 a.m. to 12:00 noon under the co-chairmanship of Dr. Albert A. Hornor and Dr. Edward P. Bagg.

Dr. Reginald Fitz and Dr. Frank H. Lahey discussed the Procurement and Assignment Service. Both answered many questions and emphasized the immediate need of the armed forces for doctors. They both agreed that this was not being met. They hoped that it would not be necessary to use other than voluntary means to supply this need.

The ladies held a luncheon at 1:00 p.m. at the Women's City Club of Boston. There were 49 present.

From 12:00 m. to 2:00 p.m. there was a series of section meetings and luncheons. The Section of Medicine and the Section of Surgery held a combined meeting in Parlors A, B and C under the co-chairmanship of Dr. Erwin C. Miller and Dr. Grantley W. Taylor. The attendance was 143. The Section of Pediatrics, Dr. Philip H. Sylvester, chairman, met at the Junior League, Zero Marlborough Street. The attendance was 42. The Section of Obstetrics and Gynecology met at the Women's Educational and Industrial Union, 264 Boylston Street, under the chairmanship of Dr. M. Fletcher Eades. The attendance was 70. The Section of Radiology and Physiotherapy met in Parlors D and E. Dr. Joseph H. Marks was the

chairman. The attendance was 44. The Section of Dermatology and Syphilology met in Parlor F and the Hancock Room. Dr. Arthur M. Greenwood served as chairman. The attendance was 36.

From 2:00 to 4:00 p.m. a general clinical meeting was held in the Georgian Room. Dr. Frederick J. Lynch presided. There was a symposium on minor psychiatric disturbances in war and civilian life from 4:00 to 5:00 p.m. This was the last exercise of the meeting. The attendance varied from 450 to 500.

There were 69 technical and 16 scientific exhibits. These exhibits were viewed by large numbers.

The motion pictures, as usual, attracted a large number of fellows.

The lists of admissions and deaths are appended, together with the official lists of officers, standing and special committees, councilors, censors and so forth.

MICHAEL A. TIGHE, *Secretary*

ANNUAL MEETING OF THE SOCIETY

The one hundred and sixty-first annual meeting of the Massachusetts Medical Society was called to order by the president, Dr. Frank R. Ober, in the Georgian Room, at 11:00 a.m. There were approximately 650 fellows present.

The Secretary offered the record of the last annual meeting as published in the *New England Journal of Medicine*, issue of July 3, 1941, and moved its acceptance. This motion was seconded by Dr. Arthur T. Ronan, and it was so ordered by vote of the Society.

The Secretary presented the changes in membership, as follows:

Membership of Massachusetts Medical Society, as of May 22, 1941			5652
Gains			
New fellows	193		
Restorations	17		
		210	
Losses			
Deaths	109		
Resignations	12		
Deprivations	32		
		153	
Net gain			57
Membership, as of May 26, 1942			5709

The Secretary moved the acceptance of this report. This motion was seconded by Dr. William A. R. Chapin, and it was so ordered by vote of the Society.

Dr. Ober presented Dr. J. Harper Blaisdell, chairman of the Committee on By-Laws. Dr. Blaisdell moved the unanimous consent of the members present to make certain corrections in the text as presented to each member. He explained that these corrections would in no wise affect the thought involved in the by-laws. They were offered for the purpose of improving the English and for the further purpose of making these by-laws consistent throughout. The corrections submitted by Dr. Blaisdell were as follows:

In Chapter III, Section 5, line 33, after the word "councilors" insert "-elect," so as to conform with Section 6, line 13, of Chapter III.

Correct Chapter V, Section 3, beginning with line 9, to read "applicant subscribes to the by-laws of the Society and code of ethics of the Society and of the American Medical Association. . . ."

Correct Chapter V, Section 3, so that the paragraph beginning on line 13 shall read as follows: "He shall furnish each new fellow with a copy of the *Digest, By-Laws, Code of Ethics and Medical Defense Act* of the Society, and of the *Code of Ethics* of the American Medical Association."

In Chapter V, Section 3, the paragraph beginning on line 17 and ending with the word "examined," should be deleted to comply with the deletion of Section 4 in this same chapter as this section appeared in the original text.

Correct Chapter VI, Section 8, so as to read as follows: "The traveling and incidental expenses of the officers, of the committees of the Society elected by districts and of standing committees of the Society, on request, shall be paid by the Treasurer, on presentation of an itemized bill duly approved by the President."

Dr. Blaisdell's motion was seconded by Dr. George Leonard Schadt, and it was so ordered by the unanimous consent of the members.

The first four chapters of the text as submitted, with the corrections noted, were adopted by the members without dissent. The corresponding chapters of the by-laws as amended in 1941 were deleted by vote of the members without dissent.

Dr. Blaisdell moved the adoption of Chapter V of the text as submitted. This motion was seconded by Dr. William H. Allen.

Dr. Herrman L. Blumgart said he had serious misgivings in connection with Chapter V, Section 2(*b*). He added that the state government, through the Massachusetts Board of Registration in Medicine, decides on the professional competence of applicants, and to the Society is left the determination of the proper character of all such applicants. It seems clear, he continued, that this by-law provides for very careful supervision and screening of all applicants according to the judgment of the individual members of the committees, and by adding to all that, the requirement of practice in the United States for five years, a grave injustice will be done to certain applicants.

Dr. Joseph H. Pratt said that he was in agreement with Dr. Blumgart and that a great wrong will be done if properly qualified physicians are not permitted to join the Massachusetts Medical Society until five years have passed after they have

been accepted as qualified physicians by the Massachusetts Board of Registration in Medicine.

Dr. Oliver Cope said he thought that Section 2 (*b*) as it appears in the text was somewhat revolutionary in concept. He added that there were many objections to it. It indicated, he continued, that the membership committees of the district medical societies are incompetent to decide who should be taken into membership.

Dr. Robert B. Osgood expressed the thought that Section 2(*b*) as it appears in the text is un-American and that it is not appropriate coming at this time when we are trying to obtain unity.

Dr. Blaisdell said there was nothing revolutionary in Section 2(*b*) as it appears in the text. He quoted from the by-laws as amended in 1941 as follows:

> An applicant for fellowship who is a graduate of a foreign medical school or college or a domestic medical school or college not on the list recognized by the Council or of a medical school no longer in existence, and who has practiced for a minimum of five years, shall apply for fellowship . . . .

He referred to Burrage's *History of the Massachusetts Medical Society* as explanatory of what was in the minds of the originators of the old by-law. He said that this history made it very clear that applicants for membership should have lived in a community sufficiently long to afford their confreres opportunity to pass on their standards of practice. He added that the supervising censors overwhelmingly supported a much more restrictive Section 2(*b*) than the one that appears in the text.

Dr. David L. Halbersleben wanted to know if it was possible for these men to become honorary members. He was answered in the affirmative.

Dr. George D. Henderson, a member of the Committee on Medical Education, spoke in agreement with Dr. Pratt and Dr. Blumgart.

Dr. John Fallon pointed out that if Section 2 (*b*) of the text was not accepted there would be a serious upset of other parts of the text as presented. He added that the Committee on By-Laws and the Council, in adopting Section 2 (*b*) of the text, felt it took about five years to really know what kind of medicine a fellow practiced.

Dr. Jacob Fine observed that since 1937 the Massachusetts Board of Registration in Medicine had licensed 250 graduates of foreign medical schools and of that number about 100 are now in practice in Massachusetts. He added that the number of these men who have not lived up to the professional and ethical qualifications of the Society is insignificant. He added further that these men would not be permitted to take their patients to hospitals unless they were members of the Massachusetts Medical Society. The best opportunity in which to study such men would therefore be lost.

Dr. Blaisdell at this point, with the unanimous consent of the members, withdrew his motion to adopt Chapter V. He then moved to adopt Section 2 (*b*) of Chapter V of the text as presented. This motion was seconded by Dr. Albert A. Hornor.

At the request of Dr. Reginald Fitz, Dr. Blaisdell read Section 2 (*b*) of Chapter V of the text as presented. This section reads as follows:

> (*b*) The secretary of a district society shall receive an application from a graduate of a discontinued medical school, a foreign medical school or any medical school not approved by the Council only when:
>
> The applicant has possessed a license to practice medicine in the United States or its territories for at least five years. This license shall be verified by the district secretary and the data relating to it shall be recorded in the applicant's application blank;
>
> The applicant has submitted with his application the name and address of a sponsor who is a fellow of the district society concerned; and
>
> The sponsor has caused to be delivered by fellows of the Society to the secretary of the district society *confidential* written opinions on the qualifications of the applicant.

Dr. Ober, having appointed Dr. Fallon, Dr. Fitz, Dr. Allen G. Rice and Dr. Henry T. Hutchins tellers, called for a show of hands on the part of those who favored the adoption of Section 2 (*b*) of the text as presented. He then called for a show of hands on the part of those opposed.

He announced the vote as 198 for adoption and 147 against. He therefore declared Section 2 (*b*) of Chapter V as it appears in the text adopted.

Dr. Blaisdell moved the adoption of Chapter V of the text in its entirety. This motion was seconded by Dr. Charles D. McCann, and it was so ordered by vote of the members.

Dr. Blaisdell moved the deletion of Chapter V of the by-laws as amended in 1941. This motion was seconded by Dr. Peirce H. Leavitt, and it was so ordered by vote of the members.

Dr. Blaisdell moved the adoption of Chapter VI as presented in the text. This motion was seconded by Dr. Maurice Gerstein.

Dr. Chapin believed that the district treasurers should continue to collect the dues of the members of the Massachusetts Medical Society. He expressed his opposition to the chapter in the text that changed this arrangement.

Dr. Blaisdell asked for the unanimous consent of the members to withdraw his motion to adopt Chapter VI. This consent was granted.

Dr. Blaisdell moved that Section 5 of Chapter VI be adopted. This motion was seconded by a fellow. The vote which was taken by a show of hands was 191 for adoption and 40 against. Dr.

Ober announced that Section 5 of Chapter VI of the text was adopted.

Dr. Blaisdell moved the adoption of Sections 1, 2, 3, 4, 6, 7 and 8 of Chapter VI of the text. This motion was seconded by Dr. Hornor, and it was so ordered by the vote of the Council.

Dr. Blaisdell moved the deletion of Chapter VI of the by-laws as amended in 1941. This motion was seconded by Dr. David D. Scannell, and it was so ordered by vote of the Council.

Dr. Blaisdell moved the adoption of Chapter VII of the text. This motion was seconded by Dr. Scannell.

Dr. Chapin expressed a wish to hear from Dr. Schadt on the last paragraph under Section 5. Dr. Ober invited Dr. Schadt to discuss this section.

Dr. Schadt directed the attention of the members to Section 5 of Chapter VII, which provides that the Committee on Nominations shall cause its report to be published in the notice of the annual meeting of the Council. He said that he was fearful that this departure from what had been the practice over the years would lead to a good deal of political campaigning. He expressed the hope that this section of the text would not be adopted.

Dr. Carl Bearse believed that Section 5 of Chapter VII of the text should be adopted. He pointed out that the election of the officers of the Massachusetts Medical Society was a most important matter and that the members of the Committee on Nominations should not be hurried, as they were then, in performing their most important duty. He added that the Committee on Nominations could meet more than once and this fact would be of great help to it in arriving at a proper choice.

Dr. Fallon agreed with Dr. Bearse. He added that the adoption of Section 5 of Chapter VII would bring these nominations out in the open.

Chapter VII was adopted by vote of the members.

Dr. Blaisdell moved the deletion of Chapter VII of the by-laws as amended in 1941. This motion was seconded by Dr. Leavitt, and it was so ordered by vote of the members.

Dr. Blaisdell moved the adoption of Chapter VIII of the text as presented. This motion was seconded by Dr. Leavitt, and it was so ordered by vote of the members.

Dr. Blaisdell moved that Chapter VIII of the by-laws as amended in 1941 be deleted. This motion was seconded by Dr. Chapin, and it was so ordered by vote of the members.

Dr. Blaisdell moved that Chapter IX of the text as presented be adopted. This motion was seconded by Dr. Bearse, and it was so ordered by vote of the members.

Dr. Blaisdell moved that Chapter IX of the by-laws as amended in 1941 be deleted. This motion was seconded by Dr. Leavitt, and it was so ordered by vote of the members.

Dr. Blaisdell moved that the by-laws as a whole, with the corrections noted, as they appear in the text before the body, be adopted. Dr. Leavitt seconded this motion, and it was so ordered by vote of the members.

Dr. James C. McCann moved that the President be instructed to express to the Commissioner of Insurance and his associates the appreciation of the Massachusetts Medical Society for their kind co-operation and help in establishing Massachusetts Medical Service. This motion was seconded by Dr. Blaisdell, and it was so ordered by vote of the members.

Dr. McCann offered the following resolution:

WHEREAS, The House of Delegates of the American Medical Association in special session in 1935 stated that "it reaffirms, also, its encouragement to local medical organizations to establish plans for the provision of adequate medical services for all the people, adjusted to present economic conditions, by voluntary budgeting";

WHEREAS, The delegates amplified this statement in special session September 16 and 17, 1938, with the restrictive remark that "in addition to insurance for hospitalization your committee believes it is practicable to develop cash indemnity insurance plans to cover, in whole or in part, the costs of emergency or prolonged illnesses";

WHEREAS, Pursuant to this obligation thus imposed upon state and county medical societies they have so acted as to warrant the report that "by the summer of 1941, there were twenty state medical societies that had taken some steps toward the introduction of a medical *service plan to operate over the entire* state" (1941 edition, *Organized Payments for Medical Services*), and since nearly the entirety of effectively organized and planned service schemes have utilized the principle of medical-service contracts (California, Michigan, Buffalo, Utica, North Carolina, Washington, Oregon, Pennsylvania, New Jersey, Massachusetts and others);

WHEREAS, These major experimenting groups have not found wholly valid or practical for effectively aiding the lower income groups, such restricting and restrictive statements relative to contracts coming from the House of Delegates (1938) as "your committee unanimously concurs in the suggestion and recommendation that the American Medical Association adopt the principle that in any plan or arrangement for the provision of medical services the benefit shall be paid in cash directly to the individual member," and such statements as that from the revised publication, 1941 *Organized Payments for Medical Services*, page 21, that "the attitude of the American Medical Association towards methods of payment of medical bills has been clearly defined. The position [is plainly stated] that benefits should be paid to the patients in cash in the same manner as premiums are collected from them";

WHEREAS, The empirical findings of the major experimenting groups that a medical-service contract best serves the end of a more adequate distribution of needed medical care in a manner which effectually protects the

lower income groups against the mounting costs of medical care, and is directly in accord with the realistic attitude of the Massachusetts Commissioner of Insurance that the "capital" sustaining such plans with payments on the unit basis is not cash but the physician's service; and

WHEREAS, The statement of the House of Delegates September 16 and 17, 1938, that "your committee recognizes the soundness of the principles of the workmen's compensation laws" implies acceptance of the important compensation principle of arranging the delivery of complete service to the patient without additional charge by the doctor, and with payment of the physician from insurance funds, all of which is the essence of a medical-service contract; be it therefore

RESOLVED, That the state and county units of the American Medical Association in undertaking medical-service plans at the behest of the parent organization will have their hand supported if medical-service contracts, as well as cash-indemnity contracts, are given equally frank direct approval by the House of Delegates.

Dr. McCann moved that the delegates from the Massachusetts Medical Society be instructed to present this resolution to the House of Delegates of the American Medical Association at its meeting in June in Atlantic City. This motion was seconded by Dr. Schadt, and it was so ordered by vote of the members.

Dr. Fitz presented the following resolution:

WHEREAS, During the present national emergency there is urgent need for a large number of young medical officers to be enrolled from Massachusetts in the Medical Corps of the Army; be it therefore

RESOLVED, That the Massachusetts Medical Society in annual meeting assembled, respectfully requests that physicians residing in Massachusetts who wish to volunteer their services, who are American citizens, who have spent four academic years of thirty-two weeks each in a school legally chartered to teach the practice of medicine, who have received a diploma as a doctor of medicine from such a school, who have had at least a year's internship in a registered hospital and who are licensed to practice medicine in Massachusetts, be regarded as eligible for commission in the Medical Corps of the United States Army provided that they are declared available for this distinction by the local committees of the Procurement and Assignment Service for Physicians in the areas where they have legal residence, and by the Massachusetts State Committee of the Procurement and Assignment Service for Physicians; and be it further

RESOLVED, That copies of this resolution be sent to the Secretary of War, the Surgeon General of the United States Army, Mr. Paul V. McNutt, director, Office of Defense Health and Welfare Services, Dr. Frank H. Lahey, chairman, Directing Board, and Dr. Walter G. Phippen, chairman, First Corps Area Committee.

Dr. Fitz moved the adoption of the resolution. This motion was seconded by Dr. Charles E. Mongan, and it was so ordered by vote of the members.

The designated delegates from the other New England state medical societies were as follows:

MAINE: Dr. Forrest B. Ames, Bangor

NEW HAMPSHIRE: Dr. W. J. Paul Dye, Wolfeboro
Dr. Wallis D. Walker, Rye Beach

VERMONT: Dr. Clair D. Rublee, Newport

RHODE ISLAND: Dr. Charles A. McDonald, Providence
Dr. Joseph C. O'Connell, Providence

CONNECTICUT: Dr. Joseph A. LaPalme, Putnam
Dr. William J. German, New Haven

Dr. Ober sought to introduce each of these delegates. Dr. Forrest B. Ames, Bangor, was the only one to respond.

Dr. Ames said that, as a former member of the Massachusetts Medical Society, he was particularly pleased to have the privilege of bringing the greetings of the Maine Medical Association. He commented on the references which had been made earlier in the meeting to Massachusetts Medical Service and said that there was considerable interest in this subject in Maine. He invited the members of the Massachusetts Medical Society to the annual meeting of the Maine Medical Association to be held June 21, 22 and 23 at Poland Spring.

Dr. William H. Allen was recognized by the chair. He offered the following recommendation:

> The supervising censors recommend that Chapter V, Section 2(*a*), as it relates to the timetable which governs graduates of approved schools in their applications for membership in the Massachusetts Medical Society, be waived in the interest of those who are either in or who have applied for commissions in the armed forces of our country. The Board of Supervising Censors further recommends that this regulation shall prevail only for the present emergency.

Dr. Allen moved the adoption of this recommendation. Dr. Mongan seconded the motion.

Dr. Ober told the members that a recommendation similar to this had been made to the Council at its meeting the night before, and the motion calling for its adoption had been ruled out of order. He added that the recommendation now before the meeting had been submitted to counsel and that the latter expressed it as his opinion that it was entirely proper for the members of the Society to adopt it.

The motion to adopt the recommendation was put and adopted without dissent.

The Secretary again appealed to the district secretaries to send in the names of their fellows who have entered the armed forces of the United States.

Dr. Frank R. Ober then reported on "The State of the Society" as follows:

It is the duty of the retiring president at the end of his term of office to report on the state of the Society.

The total membership is now 5709. The net gain in membership over last year is 57.

The Council has held four sessions, three regular and one special. The attendance of councilors at these meetings showed a slight falling off from the previous year. This is to be deplored. Members of the Council are elected to represent their districts, and it is therefore the duty of each councilor, as an officer, to attend the meetings of the Council and remain until adjournment takes place.

Ten district-society meetings were attended by the president. Since we now have a president-elect whose duty may be to assist the president, it seems desirable that the president-elect be invited to make at least half of these visitations, thus relieving a part of the president's burdens and giving the president-elect a better acquaintance with the members.

Last year three fundamental changes were made in the by-laws: the office of president-elect was created, the term of president was limited to one year, and provision was made for an executive committee of the Council.

The Executive Committee held its first meeting on June 23, 1941, and proceeded to organize. Dr. Walter G. Phippen, your last president, was invited to be present, since it was through his efforts that this committee was advocated. Dr. Phippen was asked to speak, and he outlined some of the possible functions and duties of this new committee. The new by-laws provided that an executive secretary might be elected by the Executive Committee. It was decided to elect the executive secretary at this meeting. In order that this committee might be kept active, it was voted that it could make decisions in emergencies, advise with the officers of the Society, discuss and approve *ad interim* appointments, and formulate matters of policy in the affairs of the Society before presentation to the Council. The Executive Committee also voted that all committees having important reports to make before the Council should first submit them to the Executive Committee for review and discussion. The discussion of the committee is then to be presented to the Council in a formal report, with the idea that its deliberations might be expedited.

The Executive Committee has held three regular meetings and five special meetings. The special meetings were called to consider matters of great importance to the Society as a whole. Two meetings were held for the purpose of discussing the proposed new by-laws; one for electing the board of directors of the Massachusetts Medical Service; and one to hear and discuss the report of the chairman of the Massachusetts Committee of the Procurement and Assignment Service.

The Society is particularly fortunate that the Council elected last year a secretary who is ideal for the job. Dr. Tighe has devoted a great deal of time to the performance of his duties. His records are kept as they should be; his counsel is wise; his devotion to the best interests of the Society cannot be surpassed; in fact, it would seem to one who has worked so closely with him that his main interest in life is what is best for the Society. We should congratulate ourselves that we have selected wisely and well in filling this important office. To him, I extend the heartfelt thanks of the Society.

Your able treasurer reports that the finances of the Society are in as excellent a condition as these precarious times will permit. The Society has received interest on all securities held (except as in 1940). There are difficulties in investing funds in safe securities except those of too long maturation and at too high prices. Short first-class bonds are in demand at low returns but are safe. The collection of annual dues is not so well maintained as in 1940. There have been more requests for remission of dues than in the preceding year, in large part owing to the fact that an increasing number of our members are going into the armed services. The expenses of the Society from January 1 to May 1 have increased, owing in part to increased activities of the Society and in part to legal services. The Society is indeed fortunate that it has a treasurer who is so unselfishly devoted to our best interests. I thank him also for his support and wisdom in the able management of our financial affairs.

The standing committees have performed their duties efficiently and most satisfactorily.

The Committee on Ethics and Discipline is to be congratulated on its circumspect attitude and method of procedure dealing with those problems which come before it. Your president has attended nearly all the sessions and feels well repaid for the time spent and knowledge gained.

The Committee on State and National Legislation has not had much to do since the last annual meeting because the General Court did not meet this year. It is quite obvious that this committee has long been accustomed to limit a large part of its activities to the deliberations of the State Legislature. This should not be, because there are many problems that are being brought before Congress almost daily, a proper knowledge of which is often of the utmost concern to all of us.

The new by-laws provide for a new Committee on Legislation, whose duty should be to gather information about all matters of legislation, both state and national, in order that the Society may be apprised in due time, so that measures may be taken to support what seems to be good and to oppose when such matters do not seem best in the interest of the public welfare.

The Committee on Public Relations is one of the most important and most useful in the Society. It has been extremely useful in ironing out the plan for the Massachusetts Medical Service, before this plan was presented to the Council. Dr. Thomas H. Lanman resigned as chairman of the subcommittee that had charge of working out the details of the insurance corporation. Dr. James C. McCann was appointed to succeed him. This committee, under the able leadership of Dr. McCann, has done a superb piece of work in organizing the insurance plan for low-income groups. This plan was presented in full to the Executive Committee of the Council for consideration and review, and then was finally whipped into its present shape and accepted by the Council. The corporation, which consists of the members of the Executive Committee, elected the board of directors on May 6, and also the clerk, Mr. Edmund L. Twomey, who ably guided the subcommittee throughout the formative stages. I wish to express my deep appreciation in behalf of the Society to all those whose untiring efforts made the plan possible.

The Committee on Postgraduate Instruction conducted a very successful assembly in October, 1941. The attendance was much larger than in the two preceding years, and there was no financial loss. There was some curtailment of the extension courses, owing to the fact that there was no federal aid for the general courses.

The *New England Journal of Medicine* continues to maintain its high standards and growth. There has been an increase of 775 subscriptions to nonmembers of the Society. Sixty per cent of the papers presented to the

editorial board were accepted. The operating loss this year was $16,513.78 (nearly $4000 less than in the previous year), and is covered by your contribution to the *Journal* of $17,400.

The Society is taking an active part in the war program. The Committee on Preparedness was set up, which has thoroughly studied, together with subcommittees in the district societies, the situation of the physicians in the Commonwealth with regard to civil and hospital needs and their availability for induction into the armed services of the country. The need for medical officers is very pressing owing to the rapid expansion of the Army and Navy. We all must be prepared to make great sacrifices if the United Nations are to win this most terrible war of all time.

A Committee on Rehabilitation was appointed. The object of this committee is to see that those draftees having remediable defects may be rehabilitated so that they will be fit for war service. The committee is functioning in conjunction with the selective-service authorities.

At the October meeting of the Council, it was voted that a committee be appointed to revise the by-laws of the Society. Such a committee was organized and began to function almost immediately. Frequent meetings were held by the committee. Your president and secretary attended practically all of these. Many hours were spent every week in the study and revision of the by-laws. The new by-laws were adopted at a special meeting of the Council held in April. The attendance at this meeting was 189. Every old by-law was considered thoroughly. The continuity was rearranged so that in the new by-laws there would be eliminated the necessity of searching through many pages for special by-laws, which obviously should be in one place. There was added a new standing committee, the Committee on Industrial Medicine. The Committee on Legislation was changed to an elected committee. All elected committees were grouped and put in a prominent place. Important changes in composition without changes in principle were also made. The setup of the Committee on Membership was changed so that it would decide about membership in the Society. I wish to thank the Committee on By-Laws for its devotion to duty in producing your new by-laws.

Last year President Phippen suggested that it was time to think about changes in the headquarters of the Society. It is obvious that these quarters are inadequate for the conduct of the affairs of the Society. However, no move should be made by the Massachusetts Medical Society which would separate by any great distance the location of the Boston Medical Library from that of the headquarters, owing to the facts that the office of the *New England Journal of Medicine* is in the headquarters of the Society and that the facilities of the Boston Medical Library should be at the disposal of the *Journal*.

Dr. David Cheever, president of the Boston Medical Library, published a report in the April 30 number of the *Journal* showing the present condition of the library. The library had an investigation made by competent authorities on medical-library matters. This report shows that the library is now centrally located and has sufficient storage space for many years to come, but is understaffed because of lack of funds. It is my recommendation that some organized effort be made to help solve this situation.

The activities of the Massachusetts Medical Society are expanding more and more every year. It is necessary to support these activities by having committees chosen wisely. The officers of the Society are finding that more and more demands are being made on their time in order to manage its affairs properly.

I have endeavored at all times to work for the best interests of the Society as a whole to the end that every physician in the Commonwealth will realize more and more that he can depend on an organization which he can support and which will support him in his efforts to care for and guard the health of his patients.

May I now thank all those officers and committees who have performed their duties so faithfully and well. I also wish to express my heartfelt appreciation for the confidence that you, the members of the Massachusetts Medical Society, have placed in me during the past year.

Dr. Ober introduced Dr. William B. Castle, who delivered the Annual Oration, entitled, "Some Remarks on Therapy for Anemia" (published in the *New England Journal of Medicine*, issue of June 4, 1942).

Dr. Ober announced that the Council would reconvene at 2:45 p. m. in the Salle Moderne.

Dr. Mongan moved that a rising vote of thanks be extended to Dr. O'Halloran and his associates on the Committee of Arrangements for the fine program they had presented. This motion was seconded by Dr. Bearse and adopted unanimously in the midst of great applause.

Dr. Mongan moved a rising vote of thanks to Dr. Castle. This motion was seconded by Dr. Fallon and adopted with great applause.

Dr. Mongan commented on the importance of the work that had been accomplished in the year that had just come to a close. He called it a history-making year. He complimented the executive officers of the Society and moved that the members extend to them a rising vote of thanks. This motion was seconded and adopted with loud applause.

Dr. Ober called on Dr. Roger I. Lee, president-elect of the Society. Dr. Lee was not present.

Dr. Ober presented Dr. George Leonard Schadt, president of the Massachusetts Medical Society for the ensuing year. Dr. Schadt was greeted with great applause.

It was moved by Dr. Mongan and seconded by Dr. Fitz that the meeting be adjourned. The motion was adopted by vote of the members.

At 1:55 p. m. Dr. Ober declared the one hundred and sixty-first annual meeting of the Society adjourned.

MICHAEL A. TIGHE, *Secretary*

APPENDIX

Admissions Recorded from May 22, 1941, to May 26, 1942

YEAR OF ADMISSION	NAME AND RESIDENCE	MEDICAL SCHOOL
1942	Adams, Raymond Delacy, Winchester	Duke
1941	*Adler, Eric David, Greenfield	University of Heidelberg
1941	Allen, Fred Harold, Jr., Boston	Harvard
1942	*Andosca, John Baptist, Mattapan	Royal College of Physicians and Surgeons, London
1942	*Angyal, Andras, Worcester	University of Turino
1942	Ashley, Alta, Needham	Vanderbilt
1942	Bailey, Charles Cabell, Boston	University of Virginia
1942	*Barone, William Daniel, Winchester	Middlesex
1941	Barry, Thomas A., East Boston	Tufts
1941	Bedinger, Ada Doughty, Taunton	University of Pennsylvania
1941	*Bell, Solomon Z., Dorchester	Middlesex
1941	Belsky, John, Chelsea	Boston University
1942	Benedetti, Charles Carl, Hathorne	Hahnemann
1941	*Bennett, Nathaniel Noah, Brookline	Middlesex
1942	Bergin, Joseph David, Worcester	Boston University
1941	*Bernstein, Siegmund, New Bedford	University of Vienna
1942	*Bialow, Solomon Philip, Newton Centre	Middlesex
1942	Blanchard, Stanley W., Boston	Tufts
1942	*Bloomenthal, Abraham Phillip, Waltham	Middlesex
1942	Bloomfield, Stanley T., Boston	Boston University
1941	*Blumenthal, Fred Ralph, Taunton	University of Berlin
1942	*Borenstein, Morris Victor, Springfield	University of Vienna
1941	*Boynton, George Hollis, Billerica	Middlesex
1942	Branch, Dexter Roland, Lynn	New York University
1941	*Brick, Edward Jerome, Northampton	Middlesex
1942	Briere, Arnold Charles, Lynn	Tufts
1941	Broadhurst, Alice Mary, Watertown	Tufts
1942	Broady, Harold, Lowell	St. Louis University
1942	Brownlee, Robert Emery, Boston	Harvard
1942	*Buono, Charles Louis, Worcester	Middlesex
1942	Burke, Jacob B., Chelsea	Tufts
1942	Burke, John Edward, Cambridge	Tufts
1941	Carpenter, Frederick John, Pittsfield	McGill
1942	Cartier, Roland Rodolphe, Rutland	University of Montreal
1941	Casey, David Timothy, Cambridge	Tufts
1942	Chadwell, Virginia Towse, Swampscott	Boston University
1942	Chase, John Seaman, Brockton	Harvard
1942	*Chase, Louis Samuel, Cambridge	University of Berlin
1941	*Cohn, Ernst, Dorchester	University of Wuerzburg
1941	Crosby, Walter Franklin, Sterling	Tufts
1941	Cutter, Edward Parker, Cambridge	Harvard
1942	*Denny-Brown, Derek Ernest, Cambridge	Otago University
1941	*Deutsch, Felix, Cambridge	University of Vienna
1942	Dexter, Lewis, Boston	Harvard
1942	*DiSalvo, Joseph John, Lawrence	Middlesex
1942	*Dobelle, Martin, Pittsfield	University of Ghent
1942	*Douglass, Hector Bertram, Bridgewater	Middlesex
1942	Durfee, Marion Birch, Worcester	University of Colorado
1941	Eigner, Sidney, Lynn	Boston University
1942	Ernst, Robert Goodfellow, Springfield	Yale
1942	Evans, Frances Eugenia, Boston	Tulane University of Louisiana
1942	Fairbanks, Edward Joseph, Webster	Harvard
1942	*Felsen, Herman, Easthampton	Anderson College of Medicine, Glasgow
1942	Ferguson, Albert Barnett, Canton	Cornell
1942	*Finkelstein, Samuel Manuel, Dorchester	Middlesex
1941	Fiumara, Nicholas John, Boston	Boston University
1942	Flynn, Simon A., Boston	McGill
1941	Foote, Estelle, Waverley	University of Vermont
1942	Forster, Francis Michael, Wellesley	University of Cincinnati
1941	*Forti, Emilio, Chestnut Hill	Royal University of Modena
1941	†*Freund, Ernest, Boston	University of Prague
1942	Galuszka, Bronislaus Andrew, Barre	Tufts

1941	*Gerbi, Claudio, Boston	Royal University of Milan, Italy
1942	Giddings, W. Philip, Boston	Harvard
1941	*Goldberg, Joseph, Malden	Middlesex
1942	*Goldfarb, Samuel, Onset	College of Physicians and Surgeons, Boston
1941	*Golickman, Louis, Whitinsville	Middlesex
1942	*Gould, Malvin, Jamaica Plain	Middlesex
1942	*Grandfield, Robert Francis, Sandwich	Middlesex
1941	Grover, Nathan Zachary, Springfield	Tufts
1941	Hagan, Cornelius E., Jr., Fall River	Medical College of Virginia
1941	*Haight, Meyer H., West Warren	Middlesex
1941	*Haines, George Arthur, Everett	Middlesex
1941	Hamel, Albert Gerard, Taunton	Georgetown University
1942	Hawes, Lloyd Elmer, West Somerville	Harvard
1941	Hight, Donald, Worcester	Harvard
1942	Hill, Edwin Valentine, Lexington	Tufts
1942	Hopkins, Elizabeth A., Boston	Tufts
1941	Hueber, John Wemyss, West Somerville	Tufts
1942	Hurlbut, Robert Satterlee, Cambridge	Harvard
1942	Hussey, Mae Grace Schissler, Quincy	University of Cincinnati
1942	Izenstein, Louis Arthur, Springfield	University of Cincinnati
1942	Jacob, Louise Hurst, Westboro	University of Colorado
1942	Jetter, Walter William, Hingham	University of Buffalo
1942	*Kaplan, Isadore, Chelsea	Middlesex
1942	*Karbowniczak, John Joseph, Jr., Lowell	Middlesex
1942	Katz, Kermit Harry, Dorchester	Boston University
1942	*Kelemen, George, Boston	University of Budapest
1942	Kelly, Francis James, Worcester	Hahnemann
1942	Kinney, Thomas D., Boston	Duke
1941	*Kleinhandler, Eugene, Pittsfield	University of Berlin
1941	Kopans, David Eli, Newton	Harvard
1941	Kowal, Anne Helene, Waverley	University of Michigan
1941	Lamisha-Smith, Vera, Swansea	College of Medical Evangelists
1941	*Landau, Irving Isaac, Billerica	University of Berlin
1941	*Landers, Thornton Ainsworth, Whitman	Middlesex
1942	*Lankenner, Peter Anthony, Worcester	Middlesex
1942	Leach, Harriet Peabody, Chelmsford	Yale
1941	Leary, Deborah Cushing, Jamaica Plain	Yale
1942	Leary, John Edward, Springfield	Tufts
1941	Leonard, Paul Charles, Dorchester	Tufts
1941	*Levi, Paolo, Watertown	University of Milan, Italy
1942	*Loker, William Wright, Framingham	Middlesex
1941	Lynch, John Bernard, Jr., Dorchester	Tufts
1941	Lyons, Arthur William, Brighton	Tufts
1942	*Macdonald, Martin Luther, Waltham	College of Physicians and Surgeons, Boston
1941	Macklin, James Joseph, Jr., Cambridge	Tufts
1941	Magnet, Isaac Harry, Lee	Tufts
1941	Magnuson, Paul Lassonde, New Bedford	New York University
1941	Marcoux, William George, Melrose	Tufts
1942	Marnane, Joseph Patrick, Gardner	Tufts
1941	*Mazzolini, Andrew, Holyoke	Middlesex
1941	McAlpin, Kenneth Rose, Williamstown	Columbia University
1941	McCollum, Donald C., Brookline	George Washington University
1942	*Meinhardt, Charles, Malden	College of Physicians and Surgeons, Boston
1941	*Merzbach, Peter Francis, Cambridge	University of Frankfort, Germany
1942	Messina, Salvatore Joseph, Somerville	Boston University
1941	Mezer, Jacob, Brookline	Tufts
1942	Mikalonis, Joseph Paul, Dorchester	Tufts
1942	Miller, Lois Cowan, Roxbury	University of Pittsburgh
1942	*Milone, Antonio Peter, Roslindale	Middlesex
1942	Moher, James Joseph, Lynn	Yale
1941	Mooney, Daniel Leo, Fall River	Harvard
1942	Mulligan, Francis Joseph, Newton	Boston University
1942	Mullowney, James Philip, Worcester	Loyola University
1942	*Nelson, Charles Edward, Lawrence	Middlesex
1941	Neuhauser, Edward B. D., Cambridge	University of Pennsylvania
1942	*Newlander, Harold, Malden	Middlesex
1941	*Nobili, Conrad, Quincy	Royal University of Rome
1941	*Nossiff, George Seavey, Milford	Middlesex
1942	O'Brien, David Francis, Somerville	Harvard

1942	Ohrenberger, Henry Wendell, Dorchester	Tufts
1941	*Ornstein, Frank Edward, Arlington	University of Vienna
1942	*Pallotte, John James, Essex	Kansas City University of Physicians and Surgeons
1942	Palmieri, Salvatore, Boston	Tufts
1941	*Picard, Julius, Fall River	University of Heidelberg
1941	*Portman, Abraham, Islington	Middlesex
1942	Rattigan, John Patrick, Hyde Park	Boston University
1941	*Redlich, Fredrick Carl, Boston	University of Vienna
1941	Rhinelander, Frederic William, 2nd, Jamaica Plain	Harvard
1941	*Richards, Hazel Hortop, Malden	Middlesex
1942	Rissler, Ross William, Brighton	Indiana University
1941	*Rinkel, Max, Brookline	Christian Albrecht University
1942	Robbins, Laurence Lamson, Cambridge	University of Vermont
1941	*Robinson, Joseph, Hyannis	Middlesex
1941	Ross, Joseph Foster, Brookline	Harvard
1941	*Rothschild, Karl, Malden	University of Munich
1942	Rowe, Winston Judd, Natick	Tufts
1942	Runci, Dominic, Winchester	Middlesex
1942	Runge, Paul Martin, Brockton	Boston University
1942	Sabbagh, Joseph Najeeb, Lawrence	Boston University
1941	*Salomon, Adolph, Williamstown	University of Frankfort
1942	Saltzman, Charles, Harding	Boston University
1941	Sanborn, Frederick, Pocasset	Harvard
1942	Santacross, Nicholas Lewis, Jr., Milton	Harvard
1941	Sarris, Spiros Peter, Lynn	Harvard
1941	*Savignac, Raymond Joseph, Worcester	Strasbourg University
1941	*Schlomer, George Max, Georgetown	University of Munich
1941	Schoenbach, Emanuel Barnett, Boston	Harvard
1942	Sciuto, Joseph Alfred, New Bedford	Hahnemann
1941	Settlage, Arnold Frederick Ernest, Newburyport	Harvard
1942	Shapiro, Morris William, East Gardner	Tufts
1942	Sherman, David S., Brookline	Boston University
1941	Sicard, Louis Adrien, Lowell	Tufts
1942	Silverman, Samuel, Dorchester	Harvard
1942	Silverstein, Louis Basil, Waltham	Boston University
1941	Simeone, Fiorindo Anthony, Brookline	Harvard
1941	*Slate, Benjamin, Cambridge	Middlesex
1942	Smith, Helen Olivia Price, Waltham	Boston University
1941	Smith, Robert Moors, Cohasset	Harvard
1941	*Sobel, Harry, Hyannis	Middlesex
1942	Soutter, Lamar, Boston	Harvard
1942	Stellar, Lawrence Irving, Newton Highlands	Tufts
1942	Stewart, Charlotte A., Harding	Yale
1942	Stone, Nathaniel Maurice, Brookline	Tufts
1942	*Sulzbach, Wolfgang Max Ferdinand, Waverley	University of Bonn, Germany
1941	Swan, Daniel Mason, Quincy	University of Rochester
1942	*Teed, Roy William, Milford	Middlesex
1941	*Tell, Abram Batt, Worcester	Kansas City University of Physicians and Surgeons
1942	Tighe, Thomas James Gasson, Lowell	Harvard
1942	Tracey, Martin L., Brookline	Jefferson Medical College of Philadelphia
1941	Tripp, Edwin Prescott, Jr., Falmouth	Jefferson Medical College of Philadelphia
1942	*Tulloch, Prescott Ellis, Somerville	Middlesex
1942	Van Huysen, William Theodore, Weston	Tufts
1942	*Warburton, Norman Wilson, New Bedford	Middlesex
1941	Ward, Arthur Downing, Worcester	Tufts
1942	Weiner, Abraham Alfred, Saugus	Middlesex
1941	Whitcomb, Austin Elwood, South Hadley Falls	Columbia University
1942	**White, Seymour James, Lawrence	University of Paris
1941	White, Thomas Paul, West Newton	Tufts
1942	Wies, David, Waverley	Tufts
1942	Yovino, Emanuel M., South Boston	Tufts
1941	Zeller, John Wallace, Boston	Harvard

Total number of new fellows admitted December, 1941	86
Total number of new fellows admitted May, 1942	107
Grand total	193

*The candidate, after a personal interview, was approved by the Committee on Medical Education and permitted to take an examination before a board of censors.

†Deceased.

Deaths Reported from May 22, 1941, to May 26, 1942

ADMITTED	NAME	PLACE OF DEATH	DATE OF DEATH	AGE
1894	Albee, George MacDonald	Worcester	August 10, 1941	70
1903	Alexander, Thomas Branch	Scituate	August 28, 1941	65
1940	Anderson, Bertha Olive	Pittsfield	June 25, 1941	58
1899	Andrews, Harold Virgil	Boston	June 9, 1941	68
1927	Baker, Norman Clyde	Lexington	July 31, 1941	58
1938	Baldauf, Leon Kahn	Waltham	April 30, 1942	64
1892	Barnes, Francis John	Cambridge	April 28, 1942	79
1900	Barnes, James Arthur	Worcester	September 6, 1941	69
1905	Bartlett, Walter Oscar	Boston	November 5, 1941	62
1898	Benson, Charles Sweetser	Haverhill	April 30, 1942	69
1933	Bianco, Joseph Anthony	Boston	May 23, 1941	59
1924	Blackfan, Kenneth David	Louisville, Kentucky	November 29, 1941	58
1904	Blake, Allen Hanson	Somerville	December 9, 1941	60
1906	Blake, Gerald	Brookline	July 28, 1941	61
1903	Bonney, Robert	East Boston	March 22, 1942	83
1894	†Bragg, Francis Adelbert	Foxboro	February 6, 1942	77
1928	Breen, John Joseph	Lowell	February 3, 1942	39
1917	†Briggs, Joseph Emmons	St. Petersburg, Florida	January 3, 1942	72
1884	Brown, George Artemas	Barre	March 15, 1942	84
1897	†Burnett, Frank Hollis	Brockton	June 21, 1941	75
1892	†Burns, Hiram Hutchins	Plymouth	May 10, 1941	85
1905	Celce, Frank Frederick	Holyoke	April 28, 1942	74
1903	Cholerton, Herbert	West Somerville	September 25, 1941	68
1902 } 1924 }	Chrystal, Michael Henry	Leominster	July 13, 1941	73
1904	Clarke, Inez Louise	Cambridge	March 7, 1942	Unknown
1914	Cook, James Henry	East Hampstead, New Hampshire	March 28, 1942	58
1898 } 1903 }	Coon, George Bailey	Greystone Park, New Jersey	January 18, 1941	72
1889	†Craigin, George Arthur	Swampscott	October 24, 1941	78
1913	Dalton, Charles Howard	Somerville	February 12, 1942	65
1895	Damon, Arthur Llewellyn	North Wilbraham	April 30, 1942	74
1906	†Davis, Minot Flagg	Cambridge	July 26, 1941	79
1884	Delahanty, William Joseph	Worcester	May 10, 1942	84
1893	DeLue, Frederick Spaulding	Boston	March 17, 1941	72
1936	Diez, Mary Luise	Boston	April 12, 1942	63
1931	Dougherty, Harry Lawton	Boston	June 1, 1941	42
1922	Downey, Hugh James	Pittsfield	January 31, 1942	59
1935	Edgar, William Ladell	Athol	October 11, 1941	69
1899	Fair, John Francis	Cambridge	May 20, 1941	72
1906	Field, Henry Martyn	Norwood	May 20, 1942	67
1928	Flagg, Franklin Ivan	Boston	October 10, 1941	54
1903	Fleming, Peter Joseph	Jamaica Plain	December 15, 1941	66
1894	†Frame, Joseph	Rockland	May 24, 1941	75
1941	Freund, Ernest	Boston	February 19, 1942	64
1907	Fuller, Ernest	Lawrence	September 14, 1941	68
1901	†Galvin, William	North Adams	April 8, 1942	83
1933	Gilman, Bernard Barrett	Boston	May 31, 1941	37
1900 } 1926 }	Goodwin, Harold Carl	Springfield	March 1, 1942	63
1935	Haigis, Peter J.	Foxboro	June 2, 1941	68
1901	Hartwell, William Winn	Malden	March 1, 1942	68
1915	Hersam, Norman Paul	Stoneham	January 15, 1942	57
1894	Higgins, James Haydn	Marston's Mills	April 7, 1942	71
1895	†Hopkins, Frederick Eugene	Springfield	July 1, 1941	83
1903	†Hurwitz, Abraham Joseph	Brookline	July 30, 1941	66
1920	Johnson, Elmon Reuben	Wollaston	October 30, 1941	70
1896	Kelleher, Patrick Francis	Cambridge	September 25, 1941	73
1927	Krantz, Michael	Forest Hills	September 4, 1941	54
1900	†Ladd, Maynard	Media, Pennsylvania	March 9, 1942	69
1884	†Lane, Edward Binney	Milton	September 17, 1941	81
1895 } 1917 }	†Leach, Albert Clinton	Orange	November 9, 1941	70
1927	Leonard, John Michael	Fall River	October 26, 1941	65
1902	Lord, Frederick Taylor	Boston	November 4, 1941	66
1933	Lord, William Ogden	New Bedford	August 8, 1941	60
1924	Lourie, Osip Raphael	Boston	October 27, 1941	68

1906	Macdonald, Frederick Cornelius	Boston	October 27, 1941	65
1891	Mallory, Frank Burr	Brookline	September 27, 1941	78
1933	Manning, Arthur Francis	Waltham	December 12, 1941	39
1897	Martin, Archibald Herbert	Boston	December 13, 1941	69
1884	†Mason, Atherton Perry	Fitchburg	October 20, 1941	85
1930	McCrossan, Charles Leo	Somerville	June 26, 1941	55
1927	Meledy, Joseph Aloysius	Washington, D. C.	April 1, 1942	50
1932	Mulholland, Bernard Joseph	Lawrence	April 16, 1941	57
1903	Murphy, Daniel David	Boston	August 8, 1941	75
1936	Mutty, Lawrence Theodore	Boston	February 25, 1942	36
1929	Navarro, Vicente Aguirre	Medfield	May 15, 1941	45
1900	Norton, George Paul	Fitchburg	June 12, 1941	67
1935	O'Leary, Cornelius Joseph	Brighton	May 20, 1942	39
1937	Osborne, Edward Daniel	New Bedford	May 18, 1941	64
1908	Perry, Sherman	Winchendon	April 20, 1942	63
1928	Peters, Andrew	Springfield	January 8, 1942	51
1887	†Pope, Frank Fletcher	Ashby	August 27, 1941	82
1901	Potter, Alexander Carleton	Cambridge	January 28, 1942	68
1905	Powers, George Herman	Boston	October 4, 1941	64
1898	Reed, Victor Augustus	Methuen	February 24, 1942	73
1941	Rhees, Morgan John	Waban	August 25, 1941	41
1935	Ring, Barbara Taylor	Arlington	August 31, 1941	69
1906	Rogers, Mark Homer	Boston	October 5, 1941	64
1886	†Ryan, Dennis Matthew	Ware	June 14, 1941	81
1891	†Sawyer, Walter Fairbanks	Fitchburg	December 9, 1941	73
1887	Sears, Henry Francis	Boston	January 1, 1942	80
1903	Sise, Lincoln Fleetford	Brookline	April 28, 1942	67
1898	†Smith, Alfred Charles	Brockton	July 15, 1941	72
1886	†Stone, Frank Ellsworth	Lynn	September 3, 1941	79
1891	Stowell, Edmund Channing	Marlboro, New Hampshire	December 20, 1941	65
1907	Swift, Walter Babcock	Boston	May 2, 1942	74
1902 1915	Tabor, Edward Orlando	Lowell	August 25, 1941	65
1893	Ten Broeck, Stanton Jacob	Orange	January 14, 1942	70
1880	†Tobey, George Loring, Sr.	Medonak, Maine	September 18, 1941	88
1905	Tracy, John Mathew	Springfield	July 9, 1941	72
1910	Tracy, William Leighton	Pittsfield	August 2, 1941	66
1930	Tully, George William	Southbridge	July 21, 1941	53
1928	Tuttle, George Herman	South Acton	April 2, 1942	76
1919 1939	Vickery, Eugene Augustus	Wellesley	June 22, 1941	62
1892	†Vickery, Lucia Florence	Jamaica Plain	October 23, 1941	81
1930	Wakefield, Arthur Paul	Belmont	February 6, 1942	63
1920	Walsh, James Henry	Fall River	May 14, 1941	57
1878	Watson, Francis Sedgwick	South Dartmouth	May 5, 1942	88
1927	Weiss, Soma	Boston	January 31, 1942	43
1882 1888	†Wood, Henry Austin	Waltham	February 22, 1942	86
1905	†Young, Roy Demas	Arlington	July 25, 1941	70

†Retired fellow.

Total number of deaths of active fellows	85
Total number of deaths of retired fellows	24
Grand total	109

Officers for 1942–1943

President: George Leonard Schadt, Springfield, 44 Chestnut Street.

President-Elect: Roger I. Lee, Boston, 264 Beacon Street.

Vice-President: Peirce H. Leavitt, Brockton, 129 West Elm Street.

Secretary: Michael A. Tighe, Lowell. Office, Boston, 8 Fenway.

Treasurer: Charles S. Butler, Boston, 257 Newbury Street.

Assistant Treasurer: Eliot Hubbard, Jr., Cambridge, 29 Highland Street.

Orator: Edward P. Bagg, Holyoke, 207 Elm Street.

Executive Committee of the Council

Members Ex-Officiis

President: George Leonard Schadt, Springfield, 44 Chestnut Street.

President-Elect: Roger I. Lee, Boston, 264 Beacon Street.

Vice-President: Peirce H. Leavitt, Brockton, 129 West Elm Street.

Secretary: Michael A. Tighe, Lowell. Office, Boston, 8 Fenway.

Treasurer: Charles S. Butler, Boston, 257 Newbury Street.

Term Expires 1943

Barnstable: William D. Kinney, Osterville*

Bristol North: William H. Allen, Mansfield, 70 North Main Street. (Alternate: Ralph M. Chambers, Taunton, Taunton State Hospital.)

Bristol South: Edwin D. Gardner, New Bedford, 150 Cottage Street.

Essex North: Frank W. Snow, Newburyport, 24 Essex Street. (Alternate: Rolf C. Norris, Methuen, 247 Broadway.)

Middlesex East: Kenneth L. Maclachlan, Melrose, 1 Bellevue Avenue. (Alternate: Richard Dutton, Wakefield, 33 Avon Street.)

Plymouth: Peirce H. Leavitt, Brockton, 129 West Elm Street. (Alternate: George A. Moore, Brockton, 167 Newbury Street.)

Term Expires 1944

Berkshire: John J. Boland, Pittsfield, 334 North Street.

Franklin: Frederick J. Barnard, Greenfield, 479 Main Street.

Hampden: George L. Steele, Springfield, 20 Maple Street.

Middlesex North: William M. Collins, Lowell, 174 Central Street.

Norfolk: Carl Bearse, Boston, 483 Beacon Street.

Worcester North: John J. Curley, Leominster, 82 Main Street.

Term Expires 1945

Essex South: Loring Grimes, Swampscott, 84 Humphrey Street. (Alternate: Charles L. Curtis, Salem, 10 Federal Street.)

Hampshire: L. Beverly Pond, Easthampton, 115 Main Street.

Middlesex South: Not yet elected.

Norfolk South: Daniel B. Reardon, Quincy, 1186 Hancock Street.

Suffolk: Donald Munro, Boston, 818 Harrison Avenue. (Alternate: Charles C. Lund, Boston, 319 Longwood Avenue.)

Worcester: Ralph S. Perkins, Worcester, 10 Hackfeld Road.

*Certain alternate members of the committee have not been chosen.

Standing Committees for 1942–1943

Elected by the Council, May 25, 1942

Date of Appointment

Committee on Publications — Established 1825.

R. M. Smith	June 6, 1933 (appointed chairman May 21, 1941)
J. P. O'Hare	June 9, 1936
Conrad Wesselhoeft	June 2, 1937
W. B. Breed	February 7, 1940
Oliver Cope	May 21, 1941

Committee on Arrangements — Established 1849.

G. M. Morrison	May 21, 1941 (appointed chairman† June 24, 1942)
R. J. Heffernan	May 25, 1942
S. C. Wiggin†	June 24, 1942
R. H. Barker†	June 24, 1942
R. I. Smith†	June 24, 1942

Committee on Ethics and Discipline — Established 1871.

R. R. Stratton	June 9, 1936 (appointed chairman May 21, 1941)
W. J. Brickley	February 3, 1937
A. G. Rice	June 1, 1938
F. R. Jouett	May 21, 1940
A. R. Gardner	May 21, 1941

Committee on Medical Education — Established 1881.

R. T. Monroe	May 21, 1941 (appointed chairman February 4, 1942)
G. D. Henderson	June 1, 1938
L. S. McKittrick	May 21, 1940
C. S. Keefer	February 4, 1942
I. R. Jankelson	May 25, 1942

Committee on Membership — Established 1897.

H. F. Newton	June 9, 1931 (appointed chairman May 25, 1942)
John E. Fish	June 17, 1930
P. H. Leavitt	June 1, 1938
A. W. Reggio	May 21, 1940
L. S. McKittrick	May 25, 1942

Committee on Public Health — Established 1912.

F. P. Denny	June 1, 1938 (appointed chairman June 7, 1939)
Gerald Hoeffel	June 17, 1930
H. L. Lombard	June 4, 1935
H. F. Day	June 7, 1939
F. W. Marlow, Jr.	May 25, 1942

Committee on Medical Defense — Established 1927.

A. W. Allen	June 7, 1927 (appointed chairman June 7, 1939)
E. D. Gardner	June 7, 1927
W. R. Morrison (Sec. *pro tem*)	June 9, 1936
Horatio Rogers	June 7, 1939
G. S. Reynolds	May 21, 1941

Committee on Society Headquarters — Established 1932.

W. H. Robey	February 24, 1937 (chairman)
C. G. Mixter	June 8, 1932
J. M. Birnie	June 8, 1932
C. S. Butler	June 4, 1935
E. C. Miller	June 4, 1935

†Interim appointment.

COMMITTEE ON FINANCE — Established 1938.

John Homans	June 2, 1938 (chairman)
E. L. Hunt	June 2, 1938
C. F. Wilinsky	June 2, 1938
E. J. O'Brien, Jr.	June 2, 1938
P. P. Johnson	October 4, 1939

COMMITTEE ON INDUSTRIAL HEALTH — Established 1942.

Dwight O'Hara	May 25, 1942 (chairman)
J. C. Aub	May 25, 1942
D. L. Lynch	May 25, 1942
H. C. Marble	May 25, 1942
J. C. Merriam	May 25, 1942
T. L. Shipman	May 25, 1942
J. N. Shirley	May 25, 1942

SPECIAL COMMITTEES

COMMITTEE ON CANCER — Established 1917.

Shields Warren, Chairman; F. G. Balch, E. M. Daland, P. E. Truesdale, C. C. Simmons.

REPRESENTATIVES TO THE MASSACHUSETTS CENTRAL HEALTH COUNCIL

Barnstable: W. D. Kinney
Berkshire: R. J. Carpenter
Hampden: G. D. Henderson
Norfolk: F. P. Denny
Suffolk: R. B. Osgood.
Worcester: E. C. Miller

COMMITTEE ON PUBLIC EDUCATION (a subcommittee of the Committee on Public Health) — Established 1930.

F. P. Denny, *chairman*; Gerald Hoeffel, *secretary*; G. R. Minot, W. H. Robey, R. M. Smith, E. H. Place, C. C. Simmons, J. H. Pratt, H. W. Stevens, J. B. Ayer, H. P. Mosher, F. R. Ober, E. P. Joslin, J. D. Barney, H. L. Lombard.

COMMITTEE ON PUBLIC RELATIONS — Established 1931. (One councilor elected yearly by each district medical society; the president and president-elect of the Society are chairman and vice-chairman respectively, and the vice-president and secretary of the Society are members ex officiis.)

BARNSTABLE DISTRICT MEDICAL SOCIETY
W. D. Kinney, Osterville.

BERKSHIRE DISTRICT MEDICAL SOCIETY
P. J. Sullivan, Dalton, 471 Main Street.

BRISTOL NORTH DISTRICT MEDICAL SOCIETY
J. H. Brewster, Attleboro, 178 South Main Street.

BRISTOL SOUTH DISTRICT MEDICAL SOCIETY
H. E. Perry, New Bedford, 159 Cottage Street.

ESSEX NORTH DISTRICT MEDICAL SOCIETY
E. S. Bagnall, Groveland, 281 Main Street. (Secretary of committee.)

ESSEX SOUTH DISTRICT MEDICAL SOCIETY
E. D. Reynolds, Danvers, 48 High Street.

FRANKLIN DISTRICT MEDICAL SOCIETY
H. G. Stetson, Greenfield, 39 Federal Street.

HAMPDEN DISTRICT MEDICAL SOCIETY
P. E. Gear, Holyoke, 188 Chestnut Street.

HAMPSHIRE DISTRICT MEDICAL SOCIETY
A. J. Bonneville, Hatfield, 60 Main Street.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY
J. H. Blaisdell, Winchester. Office, Boston, 45 Bay State Road.

MIDDLESEX NORTH DISTRICT MEDICAL SOCIETY
D. J. Ellison, Lowell, 8 Merrimack Street.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY
J. P. Nelligan, Cambridge, 2336 Massachusetts Avenue.

NORFOLK DISTRICT MEDICAL SOCIETY
N. A. Welch, West Roxbury. Office, Boston, 520 Commonwealth Avenue.

NORFOLK SOUTH DISTRICT MEDICAL SOCIETY
F. A. Bartlett, Wollaston, 308 Beale Street.

PLYMOUTH DISTRICT MEDICAL SOCIETY
C. D. McCann, Brockton, 12 Cottage Street.

SUFFOLK DISTRICT MEDICAL SOCIETY
A. A. Hornor, Boston, 319 Longwood Avenue.

WORCESTER DISTRICT MEDICAL SOCIETY
C. A. Sparrow, Worcester, 21 West Street.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY
J. J. Curley, Leominster, 82 Main Street.

COMMITTEE ON POSTGRADUATE INSTRUCTION — Established 1932.

Reginald Fitz, *chairman*; L. E. Parkins, *secretary*; J. W. O'Connor, R. N. Nye, C. J. Kickham.

COMMITTEE ON PHYSICAL THERAPY — Established 1935.

F. P. Lowry, *chairman*; R. B. Osgood, G. R. Minot.

COMMITTEE TO CONSIDER EXPERT TESTIMONY — Established 1936.

F. R. Ober,* *chairman*; David Cheever, F. P. McCarthy, Carl Bearse, W. J. Brickley.*

COMMITTEE ON AUTOMOBILE INSURANCE CLAIMS — Established 1937.

H. C. Marble, *chairman*; H. M. Landesman, *secretary*; P. P. Henson.

COMMITTEE ON CONVALESCENT CARE — Established 1938.

T. D. Jones, *chairman*; H. E. Gallup.

COMMITTEE ON ARMY MEDICAL LIBRARY AND MUSEUM — Established 1939.

H. R. Viets, *chairman*; R. B. Osgood, Benjamin Spector.

COMMITTEE TO STUDY PRACTICE OF MEDICINE BY UNREGISTERED PERSONS — Established 1939.

Richard Dutton, *chairman*; B. F. Conley, E. F. Timmins.

*Interim appointment.

TWENTY-FIVE VOTING MEMBERS IN THE MASSACHUSETTS HOSPITAL SERVICE, INC. — Established 1939.

B. H. Alton, E. S. Bagnall, G. M. Balboni, W. B. Breed, L. D. Chapin, H. F. Day, J. F. Donaldson, A. W. Dudley, John Fallon, J. E. Flynn, A. R. Gardner, H. W. Godfrey, D. L. Halbersleben, J. H. Lambert, A. A. Levi, Donald Monro,* A. E. Parkhurst, Helen S. Pittman, A. G. Rice, A. T. Ronan, F. W. Snow, G. L. Steele, R. R. Stratton,* J. E. Talbot, E. L. Young.

COMMITTEE CONCERNED WITH PREPAYMENT MEDICAL-CARE COSTS INSURANCE — Established 1940.

J. C. McCann, *chairman*; E. S. Bagnall, Shields Warren, P. H. Leavitt, W. B. Breed.

COMMITTEE ON TAX-SUPPORTED MEDICAL CARE — Established 1940.

E. S. Bagnall, *chairman*; A. L. Duncombe, A. A. Hornor, E. L. Hunt, W. J. Pelletier.

COMMITTEE TO MEET WITH MASSACHUSETTS HOSPITAL ASSOCIATION — Established 1940.

W. G. Phippen, *chairman*; Frederic Hagler, G. S. Reynolds, E. D. Gardner, A. E. Parkhurst, F. W. Snow.

COMMITTEE TO EXAMINE WPA RECORDS — Established 1940.

G. L. Richardson, *chairman*; W. E. Browne, D. J. Ellison, L. R. Chaput, F. P. McCarthy.

COMMITTEE ON MATERNAL WELFARE — Established 1941.

J. A. Smith, *chairman*; Thomas Almy, R. L. DeNormandie, Eoline C. Dubois, C. J. Duncan, M. F. Eades, A. F. G. Edgelow, Florence L. McKay, J. W. O'Connor, L. E. Phaneuf, G. M. Shipton, W. R. Sisson, R. M. Smith, R. S. Titus, R. J. Williams.

COMMITTEE TO STUDY THE PRACTICE OF MEDICINE — Established 1941.

Dwight O'Hara, *chairman*; B. H. Alton, A. E. Parkhurst, D. D. Scannell, Conrad Wesselhoeft.

COMMITTEE ON REHABILITATION — Established 1941.

W. E. Browne, *chairman*; W. M. Collins, J. J. Regan, B. F. Andrews, R. M. Chambers, A. L. Watkins, John Fallon.*

COMMITTEE CONCERNED WITH POSTPAYMENT MEDICAL-CARE COSTS THROUGH BANKS — Established 1942.

E. S. Bagnall, *chairman*; H. G. Stetson, D. J. Ellison.

COMMITTEE OF ONE TO VISIT VARIOUS STATE-AIDED CANCER CLINICS FOR PURPOSE OF REPORTING TO SOCIETY THEIR PRESENT STATE — Established 1942.

C. C. Simmons.

COMMITTEE ON LEGISLATION — Established 1942. (One councilor elected yearly by each district medical society.)

BARNSTABLE DISTRICT MEDICAL SOCIETY — Not yet elected.

BERKSHIRE DISTRICT MEDICAL SOCIETY — Not yet elected.

BRISTOL NORTH DISTRICT MEDICAL SOCIETY — J. L. Murphy, Taunton, 23 Cedar Street.

BRISTOL SOUTH DISTRICT MEDICAL SOCIETY — Not yet elected.

ESSEX NORTH DISTRICT MEDICAL SOCIETY — E. H. Ganley, Methuen, 251 Broadway.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY — C. A. Worthen, Lynn, 19 Park Street.

FRANKLIN DISTRICT MEDICAL SOCIETY — Not yet elected.

HAMPDEN DISTRICT MEDICAL SOCIETY — Not yet elected.

HAMPSHIRE DISTRICT MEDICAL SOCIETY — Not yet elected.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY — K. L. Maclachlan, Melrose, 1 Bellevue Avenue.

MIDDLESEX NORTH DISTRICT MEDICAL SOCIETY — Not yet elected.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY — Not yet elected.

NORFOLK DISTRICT MEDICAL SOCIETY — Not yet elected.

NORFOLK SOUTH DISTRICT MEDICAL SOCIETY — Not yet elected.

PLYMOUTH DISTRICT MEDICAL SOCIETY — Not yet elected.

SUFFOLK DISTRICT MEDICAL SOCIETY — W. B. Breed, Boston, 264 Beacon Street.

WORCESTER DISTRICT MEDICAL SOCIETY — Not yet elected.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY — Not yet elected.

COMMITTEE ON BOSTON MEDICAL LIBRARY — Established 1942.

W. H. Robey,* *chairman*; C. S. Butler,* David Cheever,* M. A. Tighe,* Shields Warren.*

REPRESENTATIVE TO MENTAL HEALTH FOR DEFENSE ORGANIZATION.

Abraham Myerson.

REPRESENTATIVE TO THE HOSPITAL COUNCIL OF BOSTON FOR THE YEAR 1942.

Fletcher H. Colby.

DELEGATES AND ALTERNATES TO THE HOUSE OF DELEGATES, AMERICAN MEDICAL ASSOCIATION FOR 1942–1943

Delegates	*Alternates*
June 1, 1941 to June 1, 1943	
J. M. Birnie, Springfield	R. J. Carpenter, Pittsfield
R. H. Miller, Boston	Cadis Phipps, Brookline
June 1, 1942 to June 1, 1944	
D. D. Scannell, Jamaica Plain	E. S. Bagnall, Groveland
Dwight O'Hara, Waltham	E. L. Hunt, Worcester
C. E. Mongan, Somerville	C. J. Kickham, Brookline
W. G. Phippen, Salem	J. I. B. Vail, Hyannis

MASSACHUSETTS COMMITTEE OF PROCUREMENT AND ASSIGNMENT SERVICE† — Established 1942

Reginald Fitz, *chairman*; H. M. Clute, J. J. Curley, E. L. Kickham, Dwight O'Hara, W. H. Pulsifer.

*Interim appointment.

†This is not a committee of the Massachusetts Medical Society. It is here listed for purposes of information only.

COUNCILORS FOR 1942–1943

ELECTED BY THE DISTRICT MEDICAL SOCIETIES AT THEIR ANNUAL MEETINGS, APRIL 15 TO MAY 15, 1942

BARNSTABLE

J. G. Kelley, Pocasset, Barnstable County Sanatorium, V. P.
J. L. Chute, Osterville, A. M. N. C.
D. E. Higgins, Cotuit, Main St., Sec.
C. H. Keene, Chatham, Seaview St.
W. D. Kinney, Osterville, E. C., M. N. C.

BERKSHIRE

G. M. Shipton, Pittsfield, 74 North St., V. P.
J. J. Boland, Pittsfield, 334 North St., E. C.
T. F. Crowley, North Adams, 247 Eagle St.
I. S. F. Dodd, Pittsfield, 34 Fenn St.
C. F. Fasce, Pittsfield, 311 North St., A. M. N. C.
E. A. Kennedy, Pittsfield, 100 North St.
G. S. Reynolds, Pittsfield, 7 North St., Sec.
Solomon Schwager, Pittsfield, 246 North St.
P. J. Sullivan, Dalton, 471 Main St., M. N. C.

BRISTOL NORTH

J. A. Reese, Attleboro, 48 Bank St., V. P.
W. H. Allen, Mansfield, 70 North Main St., E. C., M. N. C.
J. H. Brewster, Attleboro, 178 South Main St.
R. M. Chambers, Taunton, Taunton State Hospital, A. E. C.
J. L. Murphy, Taunton, 23 Cedar St., A. M. N. C.
W. H. Swift, Taunton, 141 High St., Sec.

BRISTOL SOUTH

C. A. Bonney, Jr., New Bedford, 41 Maple St., V. P.
G. W. Blood, Fall River, 82 New Boston Rd.
R. B. Butler, Fall River, 278 North Main St., A. M. N. C.
E. F. Cody, New Bedford, 105 South Sixth St., M. N. C.
J. A. Fournier, Fall River, 11 Choate St.
E. D. Gardner, New Bedford, 150 Cottage St., E. C.
F. M. Howes, New Bedford, 135 Cottage St.
D. R. Mills, Edgartown.
H. E. Perry, New Bedford, 159 Cottage St.
A. H. Sterns, New Bedford, 31 Seventh St., Sec.
I. N. Tilden, Mattapoisett, Barstow St.
C. C. Tripp, New Bedford, 416 County St.
P. E. Truesdale, Fall River, 151 Rock St.

ESSEX NORTH

E. S. Bagnall, Groveland, 281 Main St., V. P.
R. V. Baketel, Methuen, 7 Hampshire St.
L. R. Chaput, Haverhill, 3 Washington Sq.
J. P. Creed, Haverhill, 112 Emerson St.
E. H. Ganley, Methuen, 251 Broadway.
H. R. Kurth, Lawrence, 57 Jackson St., Sec.
P. J. Look, Andover, 115 Main St.
R. C. Norris, Methuen, 247 Broadway, A. E. C., A. M. N. C.
G. L. Richardson, Haverhill, 94 Emerson St., M. N. C.
F. W. Snow, Newburyport, 24 Essex St., E. C.
D. W. Wallwork, North Andover, 5 Third St.
C. F. Warren, Amesbury, 1 School St.

ESSEX SOUTH

D. S. Clark, Salem, 2 Oliver St., V. P.
Bernard Appel, Lynn, 281 Ocean St., M. N. C.
H. A. Boyle, Middleton, Essex Sanatorium.
C. P. Brown, Swampscott, 74 Humphrey St.
Hanford Carvel, Gloucester, 1038 Washington St.
C. L. Curtis, Salem, 10 Federal St., A. E. C.
R. E. Foss, Peabody, 125 Main St.
Loring Grimes, Swampscott, 84 Humphrey St., E. C.
P. P. Johnson, Beverly, 1 Monument Sq., A. M. N. C.
B. B. Mansfield, Ipswich, 4 Green St.
A. E. Parkhurst, Beverly, Monument Sq.
O. S. Pettingill, Middleton, Essex Sanatorium.
W. G. Phippen, Salem, 31 Chestnut St., Ex-Pres.
H. G. Pope, Swampscott, 90 Humphrey St., Sec.
E. D. Reynolds, Danvers, 48 High St.
J. R. Shaughnessy, Salem, 24½ Winter St.
J. W. Trask, East Lynn, 90 Ocean St.
C. F. Twomey, East Lynn, 80 Ocean St.
C. A. Worthen, Lynn, 19 Park St.

FRANKLIN

A. W. Hayes, Greenfield, 78 Federal St., V. P.
F. J. Barnard, Greenfield, 479 Main St., E. C., M. N. C.
H. L. Craft, Ashfield, Sec.
A. H. Ellis, Greenfield, 58 Federal St.
W. J. Pelletier, Turners Falls, 113 Ave. A, A. M. N. C.
H. G. Stetson, Greenfield, 39 Federal St., Ex-Pres.

HAMPDEN

G. L. Steele, Springfield, 20 Maple St., V. P., E. C.
F. H. Allen, Holyoke, 16 Fairfield St.
E. P. Bagg, Holyoke, 207 Elm St.
W. C. Barnes, Springfield, 146 Chestnut St., Sec.
J. M. Birnie, Springfield, 146 Chestnut St., Ex-Pres.
H. F. Byrnes, Springfield, 6 Chestnut St.
W. A. R. Chapin, Springfield, 121 Chestnut St.
J. L. Chereskin, Springfield, 333 Bridge St.
G. B. Corcoran, West Springfield, 84 Park St.
A. J. Douglas, Westfield, 93 Elm St.
E. C. Dubois, Springfield, 174 Buckingham St.
Adolph Franz, Jr., Holyoke, 276 Maple St.
G. L. Gabler,* Holyoke, 4 Bullard Ave.
P. E. Gear, Holyoke, 188 Chestnut St.
Frederic Hagler, Springfield, 20 Maple St.
G. D. Henderson, Holyoke, 312 Maple St.
Charles Jurist, Springfield, 70 Chestnut St.
E. A. Knowlton, Holyoke, 207 Elm St., A. M. N. C.
O. J. Menard, Springfield, 146 Chestnut St.
M. W. Pearson, Ware, 19 Pleasant St.
A. G. Rice, Springfield, 146 Chestnut St., M. N. C.
G. L. Schadt, Springfield, 44 Chestnut St., President.

HAMPSHIRE

Mary P. Snook, Chesterfield, V. P.
A. J. Bonneville, Hatfield, 60 Main St.
R. S. Clapp, Amherst, 110 North Pleasant St.
J. D. Collins, Northampton, 187 Main St., A. M. N. C.
J. R. Hobbs, Williamsburg, Main St., Sec.
L. B. Pond, Easthampton, 115 Main St., E. C., M. N. C.

MIDDLESEX EAST

C. W. De Wolf, Melrose, 8 Porter St., V. P.
J. H. Blaisdell, Winchester, Office Boston, 45 Bay State Rd.
Richard Dutton, Wakefield, 33 Avon St., A. E. C.
E. M. Halligan, Reading, 37 Salem st., A. M. N. C.
J. H. Kerrigan, Stoneham, 481 Main St.
K. L. Maclachlan, Melrose, 1 Bellevue Ave., Sec., E. C.
M. J. Quinn, Winchester, 44 Church St.

*Interim appointment.

R. R. Stratton, Melrose, 538 Lynn Fells Parkway, M. N. C., C.
J. M. Wilcox, Woburn, 6 Bennett St.

MIDDLESEX NORTH

M. A. Tighe, Lowell, 9 Central St., Secretary, V. P.
M. L. Alling, Lowell, 9 Central St.
H. R. Coburn, Lowell, 202 Merrimack St.
W. M. Collins, Lowell, 174 Central St., E. C.
R. L. Drapeau, Lowell, 174 Central St., Sec.
D. J. Ellison, Lowell, 8 Merrimack St.
A. R. Gardner, Lowell, 16 Shattuck St., A. M. N. C.
W. F. Ryan, Lowell, 219 Central St.
W. H. Sherman, Lowell, 9 Central St., M. N. C.

MIDDLESEX SOUTH

H. F. Day, Cambridge, 34 Kirkland St., V. P.
C. F. Atwood, Arlington, 821 Massachusetts Ave.
E. W. Barron, Malden, Office Boston, 20 Ash St.
W. B. Bartlett, Concord, 28 Monument St.
Harris Bass, Everett, 351 Broadway.
J. M. Baty, Belmont, Office Brookline, 1101 Beacon St.
S. M. Biddle, Cambridge, 206 Huron Ave.
E. H. Bigelow, Framingham, Hotel Kendall, Ex-Pres.
W. O. Blanchard, Newton, 465 Centre St.
G. F. H. Bowers, Newton Highlands, 156 Woodward St.
R. W. Buck, Waban, Office Boston, 5 Bay State Rd.
E. J. Butler, Cambridge, 25 Garden St.
J. J. Cochran, Natick, 15 W. Central St.
B. F. Conley, Malden, 51 Main St.
C. L. Derick, Newton Highlands, Office Boston, 412 Beacon St.
J. G. Downing, Newton, Office Boston, 520 Commonwealth Ave.
C. W. Finnerty, West Somerville, 5 Pearson Rd.
H. Q. Gallupe, Waltham, 751 Main St.
F. W. Gay, Malden, 20 Park St.
H. G. Giddings, Newton Centre, Office Boston, 270 Commonwealth Ave.
H. W. Godfrey, Auburndale, 14 Hancock St.
A. D. Guthrie, Medford, 408 Salem St.
R. D. Halloran, Waltham, Metropolitan State Hospital.
Eliot Hubbard, Jr., Cambridge, 29 Highland St., Assistant Treasurer.
L. H. Jack, West Newton, 379 Austin St.
A. M. Jackson, Everett, 512 Broadway.
E. E. Kattwinkel, West Newton, 65 Sterling St.
W. N. Lanigan, Medford, 187 Main St.
A. A. Levi, Newton, Office Boston, 481 Beacon St., Sec.
F. P. Lowry, Newton, 313 Washington St.
A. N. Makechnie, Cambridge, 14 Upland Rd.
R. A. McCarty, Waltham, 751 Main St.
J. C. Merriam, Framingham, 198 Union Ave., A. M. N. C.
Dudley Merrill, Cambridge, 51 Brattle St.
C. E. Mongan, Somerville, 24 Central St., Ex-Pres.
G. M. Morrison, Waban, Office Boston, 520 Commonwealth Ave., C.
J. P. Nelligan, Cambridge, 2336 Massachusetts Ave.
S. J. G. Nowak, Belmont, Office Boston, Boston City Hospital.
E. J. O'Brien, Jr., Newton, Office Boston, 270 Commonwealth Ave.
Dwight O'Hara, Waltham, Office Boston, 5 Bay State Rd., M. N. C., C.
L. G. Paul, Newton Centre, Office Boston, 270 Commonwealth Ave.
Max Ritvo, Newton, Office Boston, 485 Commonwealth Ave.
E. H. Robbins, Somerville, 334 Broadway.
E. S. A. Robinson, Newton Centre, Office Jamaica Plain, 375 South St.
W. D. Roche, Marlboro, 196 Main St.
E. F. Ryan, Maynard, 74 Main St.
M. J. Schlesinger, Newton, Office Boston, 330 Brookline Ave.
J. W. Sever, Cambridge, Office Boston, 321 Dartmouth St.
E. F. Sewall, Somerville, 380 Broadway.
E. W. Small, Belmont, 68 Leonard St.
H. W. Thayer, Newtonville, 355 Walnut St.
A. B. Toppan, Watertown, 289 Mt. Auburn St.
J. E. Vance, Natick, Office Boston, 510 Commonwealth Ave.
B. M. Wein, Newton, Office Boston, 471 Commonwealth Ave.
R. H. Wells, Lexington, 1430 Massachusetts Ave.
M. W. White, Somerville, 21 Walnut St.
Alfred Worcester, Waltham, 314 Bacon St., Ex-Pres.
Hovhannes Zovickian, Watertown, 528 Mt. Auburn St.

NORFOLK

J. A. Seth, Milton, Office Boston, 47 Bay State Rd., V. P.
J. R. Barry, West Roxbury, 1857 Centre St.
Carl Bearse, Boston, 483 Beacon St., E. C.
Arthur Berk, Brookline, Office Boston, 270 Commonwealth Ave.
M. I. Berman, Dorchester, 1071A Blue Hill Ave.
G. F. Blood, Roslindale, 20 Belgrade Ave.
L. F. Curran, Dorchester, Office Boston, 409 Marlboro St.
William Dameshek, Brookline, Office Boston, 371 Commonwealth Ave.
F. P. Denny, Brookline, 111 High St., C.
Albert Ehrenfried, Brookline, Office Boston, 520 Beacon St.
J. J. Elliott, Roslindale, 4258 Washington St.
H. M. Emmons, Needham, Office Boston, 354 Commonwealth Ave.
J. E. Fish, Canton, Massachusetts Hospital School.
J. C. V. Fisher, West Roxbury, Office Boston, 510 Commonwealth Ave.
Morris Frank, Roxbury, 173 Humboldt Ave.
Susannah Friedman, Roxbury, Office Boston, 485 Commonwealth Ave.
David Glunts, Roxbury, 2 Franklin Garden.
B. T. Guild, Dorchester, Office Boston, 475 Commonwealth Ave.
D. L. Halbersleben, Brookline, Office Roslindale, 818 South St.
J. B. Hall, Roxbury, 60 Windsor St.
R. J. Heffernan, Jamaica Plain, Office Brookline, 1101 Beacon St.
H. J. Inglis, Chestnut Hill, Office Boston, 43 Bay State Rd., A. M. N. C.
I. R. Jankelson, Jamaica Plain, Office Boston, 483 Beason St.
H. L. Johnson, West Roxbury, Office Boston, 520 Commonwealth Ave.
C. J. Kickham, Brookline, Office Boston, 524 Commonwealth Ave.
C. J. E. Kickham, Jamaica Plain, Office Boston, 12 Bay State Rd.
E. L. Kickham, Brookline, Office Boston, 270 Commonwealth Ave.

D. L. Lionberger, Dedham, Office Roslindale, 3 Conway St.
D. S. Luce, Canton, 553 Washington St.
C. M. Lydon, Dorchester, 276 Bowdoin St.
D. L. Lynch, Roslindale, Office Boston, 245 State St.
T. F. P. Lyons, Milton, Office Boston, 270 Commonwealth Ave., Sec.
Charles Malone, Jamaica Plain, 46 St. John St.
F. P. McCarthy, Milton, Office Boston, 371 Commonwealth Ave.
R. T. Monroe, Brookline, Office Boston, 270 Commonwealth Ave., C.
F. J. Moran, Dedham, 395 Washington St.
Hyman Morrison, Roxbury, Office Boston, 483 Beacon St.
M. W. O'Connell, West Roxbury, Office Boston, Boston City Hospital.
H. C. Petterson, West Roxbury, Office Boston, 29 Bay State Rd.
Frederick Reis, Jamaica Plain, Office Boston, 416 Huntington Ave.
S. A. Robins, Roxbury, Office Boston, 636 Beacon St.
S. M. Saltz, Roxbury, 294 Seaver St.
D. D. Scannell, Jamaica Plain, Office Boston, 475 Commonwealth Ave., M. N. C.
Kathleyne S. Snow, Jamaica Plain, Office Boston, 466 Commonwealth Ave.
J. W. Spellman, Milton, Office Brookline, 1101 Beacon St.
M. H. Spellman, Jamaica Plain, Office Boston, 475 Commonwealth Ave.
J. P. Treanor, Jr., Jamaica Plain, Office Brookline, 1101 Beacon St.
W. J. Walton, Dorchester, 106 Bowdoin St.
N. A. Welch, West Roxbury, Office Boston, 520 Commonwealth Ave.

NORFOLK SOUTH

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ELECTED BY THE DISTRICT MEDICAL SOCIETIES AT THEIR ANNUAL MEETINGS IN 1942

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CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICOPATHOLOGICAL EXERCISES

FOUNDED BY RICHARD C. CABOT

TRACY B. MALLORY, M.D., *Editor*

CASE 28281

PRESENTATION OF CASE

A fifteen-year-old schoolboy was admitted to the hospital because of weakness following an illness characterized by jaundice and skin eruption.

The patient was well until a year before entry, when there was insidious onset of slight jaundice, accompanied by and possibly slightly preceded by lack of energy. The stools and urine both appeared light yellow. The patient was advised by his physician to take a dose of "salts" nightly. Subsequently, hemorrhoids developed and required lancing. However, the jaundice persisted, and was accompanied by yellow urine and stools, moderate anorexia and lassitude. Nine months before entry, blisters filled with yellowish, watery fluid appeared on the front of the chest. His physician prescribed a paste and a lotion, which somewhat allayed the itching. The lesions spread to the posterior surfaces of the legs and thighs. A dermatologist prescribed vitamin D and sodium cacodylate. The latter drug was given intramuscularly in 3-gr. doses, daily at first and later every other day. The blisters "turned purple" and then dried up. In a month, the patient's skin was clear. Therapy was discontinued, and in ten days the entire surface of the back and the inner aspects of the thighs were involved by a severe recurrence. The blisters were as large as "bunches of grapes." Cacodylate therapy was reinstituted, with improvement as dramatic as before. Throughout the nine months preceding entry, the patient's slight jaundice remained unaltered. There was some improvement in appetite. The colors of the urines and stools tended to fluctuate, with an inverse relation, one becoming lighter as the other darkened. Two weeks before entry, the patient developed a sore throat, with swelling of the lymph nodes in the right side of the neck, fever and darkening of the urine. There was also some swelling of the abdomen. Fifteen pounds' weight was lost in the first six months of the illness, and regained in the last six months.

The past and family histories were essentially irrelevant. A maternal aunt had hives. There was no known exposure to fumes or gases, and no drugs were taken other than those prescribed in the course of the illness. Tetanus antiserum was given to the patient three years before entry, when a firecracker exploded in his hand.

On admission, the patient appeared well developed and nourished. There was marked icterus of the scleras and of the warm, dry skin. The mouth and throat were dry and injected, with ragged, badly infected tonsils. Several teeth were carious. The posterior auricular and cervical lymph nodes were slightly enlarged, as were the nodes in the axillas and groins. The heart was of normal size, but seemed pushed upward. There was a soft apical systolic murmur. The lungs were clear. The abdomen was slightly distended, with bulging in the flanks and shifting dullness, although a fluid wave could not be elicited. The spleen was considerably enlarged, although not easily palpable. The liver seemed of normal size.

The blood pressure was 136 systolic, 76 diastolic. The temperature was 103°F., the pulse 100, and the respirations 22.

Examination of the blood showed a red-cell count of 3,710,000 with 10 gm. hemoglobin, and a white-cell count of 4700 with 47 per cent polymorphonuclears (including 13 per cent band forms), 36 per cent large lymphocytes, 9 per cent small lymphocytes, 7 per cent monocytes and 1 per cent basophils. The hematocrit was 35 per cent. There were 1.5 per cent reticulocytes. The prothrombin time was prolonged to about twice normal. There was no increase in red-cell fragility. The van den Bergh reaction was biphasic, at 9.0 mg. per 100 cc. The serum albumin was 2.13 gm., and the globulin 4.99 gm. per 100 cc. The nonprotein nitrogen was normal, with a reduction in urea nitrogen. The formol-gel test was positive. Agglutination tests for heterophil antigen were negative. Four blood cultures were negative. The urine showed a + test for albumin, a trace of sugar and a ++ test for bile pigment, and was urobilinogen positive in a dilution of 1:20. The stools were gelatinous and yellow, with a negative guaiac reaction; culture was negative for pathogenic organisms.

A roentgenogram of the chest showed elevation of the diaphragm, with the heart in transverse position and small areas of atelectasis in the lungs. A roentgenogram of the abdomen showed considerable density from free fluid. The spleen seemed enlarged, with the liver slightly smaller than usual.

The temperature spiked irregularly between 100 and 105°F. for two weeks, then leveled off at 100°F. The patient grew progressively worse, and there was a slight increase in ascites. Abdominal paracentesis on the seventeenth hospital day gave 7000 cc. of clear, yellow, sterile fluid, with a specific gravity of 1.018; there were 80 to 100 red cells per cubic millimeter and occasional white cells in

the sediment. Treatment included only transfusions, clyses and vitamins. After four weeks, there was bleeding from the mouth and the rectum; muscular wasting was most marked in the hands, forearms and legs. Terminally, the patient became stuporous, and the temperature rose to 106°F. Death occurred on the thirty-ninth hospital day.

Differential Diagnosis

Dr. Thomas V. Urmy: The story is that of a prolonged mild jaundice, a rather unusual recurrent skin eruption of many months' duration and a terminal phase beginning with an acute infection of the throat and characterized by rapidly developing hepatic insufficiency.

First of all, I must say that I can think of no one diagnosis that will explain the entire picture. So far as the chronic jaundice is concerned, we can eliminate hemolytic icterus because dark urine and light stools were present from the beginning, and also because later, when the patient was studied, the red-cell fragility and the urobilinogen were normal. Furthermore, many other tests indicated a biliary-tract lesion. I think that we can assume that this patient had primary intrahepatic disease, for it does not seem likely that the low-grade jaundice that he had originally could have been due to any form of obstruction. In further differentiation, catarrhal jaundice should be considered, but apparently he had none of the fever, nausea and vomiting that usually precede the onset of jaundice. It is, of course, unusual in such a case to have continued jaundice for over a year, although occasionally this occurs. I think we can dismiss catarrhal jaundice. Since the patient was a young boy developing chronic jaundice insidiously, we should consider Hanot's cirrhosis; however, we have no account of a large liver. It is stated that when he came into the hospital the liver was not definitely felt or enlarged by x-ray. However, the words of the case record, "the liver seemed of normal size," arouse some suspicion that the physical examination may not have agreed with later findings. Furthermore, to make a diagnosis of Hanot's cirrhosis, the liver need not have been enlarged when the patient came into the hospital because he had been failing fairly rapidly for two weeks before, and the liver might well have atrophied during that time. I should also mention that a toxic jaundice from some unknown cause might have started insidiously without prodromal symptoms and might have gone on to this terminal picture, but such a diagnosis is somewhat less attractive to me than Hanot's cirrhosis.

So far as the skin lesions are concerned, I can only make a guess. The fact that they were vesicular and bullous makes me think of pemphigus and dermatitis herpetiformis.

Dr. Tracy B. Mallory: The diagnosis of the dermatologist was dermatitis herpetiformis.

Dr. Urmy: That was also my diagnosis, mainly because the eruption was recurrent and itched badly, which I think pemphigus usually does not do. There were no mouth lesions or lesions on the hands, as one would expect in erythema multiforme. The interesting feature of this part of the history is that the patient was given arsenic. I wonder if the arsenic could have had a toxic effect on the liver.

Several other findings mentioned in the history should be considered, although they do not change my diagnosis. Attention is called to the fact that the posterior auricular lymph nodes were palpable, as well as nodes in the groins and axillas. The clinicians were apparently impressed by them, for they did a heterophil reaction to rule out infectious mononucleosis. Certainly, the appearance of the throat and at least the differential count, if not the total white-cell count, suggest it somewhat. Also, the presence of enlarged lymph nodes and an enlarged spleen raises the question of lymphoblastoma, but I cannot explain the whole picture on that basis. I shall regard the enlarged lymph nodes as incidental.

Finally, attention is called to the wasting that took place in the terminal stages of the disease, especially of the hands, forearms and legs. I wonder if we are being told of some type of peripheral neuritis or other local disease of the arms and legs in some way connected with the general picture. I think that we cannot assume peripheral neuritis without a history of pain. It seems wisest not to read any special meaning into this description. The patient may have had a very large abdomen, so that his general emaciation was more striking in the extremities.

When he was admitted, he was running a fever. He had a sore throat and had developed ascites. The liver may have been shrunken. What evidence we have indicates that. There was a moderate anemia, a low white-cell count, as we frequently see in intrahepatic disease, and many other indications of a diseased liver, such as a prolonged prothrombin time, an elevated van den Bergh reaction, a reversal of the albumin-globulin ratio, with marked reduction of the serum albumin, and a positive formol-gel test. Finally, the abdomen was tapped, and a fluid somewhat high in specific gravity but perfectly consistent with a transudate obtained.

It is impossible to make any more definite diagnosis than chronic liver disease. I shall call it Hanot's cirrhosis perhaps only because I have

never made the diagnosis before, and I should like to. I believe that there developed terminally an acute or subacute yellow atrophy secondary to acute tonsillitis and perhaps to the arsenic therapy.

DR. WYMAN RICHARDSON: I think this might be mycosis fungoides. Since one could say that all these symptoms might be associated with it, particularly in connection with the lymph nodes, I believe that one should consider more strongly the lymphocytic type of lymphoma as a possible explanation for the whole picture.

DR. URMY: I do not know much about it, but my impression is that this sort of skin picture does not occur in mycosis fungoides and is not so amenable to this type of treatment.

DR. RICHARDSON: Sodium cacodylate was formerly given for mycosis fungoides, with temporary improvement at least.

DR. MALLORY: That would be extremely unusual at this age.

DR. RICHARDSON: That is right. That would probably rule it out.

CLINICAL DIAGNOSIS

Hepatitis, nature undetermined, with terminal liver failure.

DR. URMY'S DIAGNOSES

Hanot's cirrhosis.
Acute yellow atrophy of liver.
Dermatitis herpetiformis.

ANATOMICAL DIAGNOSES

Cirrhosis of liver, healed atrophy (toxic) type.
Splenomegaly.
Ascites.
Icterus.
Pulmonary congestion and collapse, right lower lobe.

PATHOLOGICAL DISCUSSION

DR. MALLORY: I thought in reading this history over that the dermatologist had been courageous to treat a skin rash in a jaundiced patient with arsenic, and yet on each occasion the skin rash promptly disappeared, and the jaundice did not increase. The general condition was improved rather than otherwise so that I think the dermatologist was probably justified.

Autopsy showed a liver of normal, or slightly increased, size — weighing 1700 gm., very coarsely nodular, with big masses of young liver cells and large intervening areas of scar tissue containing innumerable bile ducts, the picture that we generally consider typical of the healed stage of acute atrophy. The microscopic examination added essentially no further information. There was no evidence of fresh or recent hepatitis. The acute episode must have been some time long past. The spleen was very much enlarged, weighing 700 gm. Certainly, it should have been easily palpable. It showed rather marked fibrosis of the type seen in long-standing portal hypertension, whatever the etiology. The kidneys were large, weighing 500 gm., were moderately bile stained, and showed pouting of the substance over the capsule, and the moderate degree of tubular degeneration that is called "bile nephrosis." I assume that it was merely secondary to the long-standing secretion of bile salts in the urine. There was nothing else.

DR. RICHARDSON: Were there any lymph nodes around the abdomen or thoracic cage?

DR. MALLORY: None that were noticed as being unusual in size.

DR. URMY: Would you guess how long it was since the atrophy had occurred?

DR. MALLORY: A year at least — perhaps much longer.

DR. URMY: Why did the patient die at this time?

DR. MALLORY: I think he unquestionably died of liver insufficiency, in spite of the size of the liver. It was a liver incapable of normal function. I am afraid that it is beyond the realms of morphologic pathology to explain why.

DR. URMY: Did the lesions suggest that the patient had improved?

DR. MALLORY: There was no active progressive hepatic-cell degeneration, but immense amounts of scar tissue had formed, some of which may have caused intrahepatic obstruction of the bile ducts or portal radicles, and the extensive reconstruction may have made the vascular architecture of the liver inadequate.

A PHYSICIAN: Do you recognize any pathologic picture that goes with dermatitis herpetiformis? What is the usual outlook in this condition?

DR. MALLORY: I am afraid I cannot answer that.

A PHYSICIAN: The condition is very difficult to treat. It is a chronic disease that usually ends fatally with some terminal infection, just like pemphigus. It is difficult to separate the two.

DR. MALLORY: I do not know of any typical post-mortem picture.

CASE 28282

PRESENTATION OF CASE

A fifty-five-year-old bartender was admitted to the hospital because of recurrent spitting of blood.

The patient was in excellent health until a year before entry, when he had a ten-day illness characterized by malaise, anorexia, coryza, dry cough, shaking chills and, probably, fever; he had no chest pain or sputum. Recovery was complete except for persistence of the dry cough. Six months before

entry, the intensity of this cough increased, during the course of a coryza, and the patient began to spit up small lumps of blood mixed with a little mucus. This continued. At first, this sputum was foul tasting, but after a week it was no longer so. Not over one or two tablespoonfuls of sputum was brought up in the course of a day, and sometimes no blood was seen for several days. In the first two weeks of this phase of the illness, there was anorexia, and a loss of 5 or 6 pounds in weight, which was subsequently regained. There were no pains, chills or fever at this time. Two months before entry, the patient consulted his physician. He was told that a roentgenogram showed "a little growth in a bronchus" and was referred to the hospital.

The patient's son had died of meningeal and renal tuberculosis. The family and past histories were otherwise of no interest. No recent dental work had been done.

On admission, the patient appeared slightly obese. The heart was slightly enlarged toward the left. The lungs were normal. The liver edge lay two fingerbreadths below the costal margin. The abdomen was otherwise normal. Bilateral indirect inguinal hernias were present. Rectal examination was negative. The fingers were not clubbed, and the legs were not tender.

The blood pressure was 130 systolic, 90 diastolic. The temperature was 99°F., the pulse 80, and the respirations 20.

Examination of the blood showed a red-cell count of 5,110,000 with 14 gm. hemoglobin, and a white-cell count of 7900 with 76 per cent polymorphonuclears, 14 per cent lymphocytes and 9 per cent monocytes. The blood Hinton reaction was negative. The urine was normal. The sputum showed no acid-fast bacilli in three examinations, but grew alpha-hemolytic streptococci in three cultures. A tuberculin test in a dilution of 1:20,000 was positive.

Roentgenograms of the chest showed a round area of consolidation, 5 cm. in diameter, in the apex of the left lower lobe, which contained a cavity without a fluid level. The left hilum was slightly lower than usual, and included a small area of calcification. The diaphragm showed normal motion. In comparison with the film taken two months before entry, the process in the apex of the left lower lobe seemed slightly decreased in size.

The temperature fluctuated from 98.6 to 100.0°F. daily. On the fifth hospital day, bronchoscopy was performed. The larynx, trachea, right bronchial tree, left main bronchus and left-upper-lobe orifice appeared normal. There was considerable blood in the trachea and left main bronchus, which apparently came from the dorsal branch of the left lower bronchus. The distal margin of this orifice appeared slightly roughened and irregular. A biopsy obtained from this area showed chronic inflammation. The terminal branches of the left main bronchus appeared normal.

The patient was given a three-day course of sulfathiazole and attained a blood level of 5.5 mg. per 100 cc. Because of nausea, sulfadiazine was substituted, and a blood level of 11 mg. per 100 cc. was reached. He continued to raise a little blood-streaked sputum. On the seventh day of sulfadiazine medication, there was a sudden rise in temperature to 105°F., accompanied by a chill and by the appearance of a faint macular rash. The chest remained clear. Drug therapy was discontinued, and the temperature returned to its previous level in a few days. A roentgenogram taken three days before this reaction showed sharper delimitation of the shadow in the left lower lobe, with a definite fluid-free cavity included in it.

On the thirty-second hospital day, an operation was performed.

Differential Diagnosis

Dr. Donald S. King: To summarize briefly, the patient gave a history of infection of a year's duration, with chills, with a dry cough for six months and without fever. He then began to raise blood and continued to cough up blood and blood-streaked sputum for another six months, and had a little fever toward the end. He appears to have had some expectoration other than blood, and it is reported that it tasted badly; however, since we did not have the opportunity to smell the sputum, we cannot be sure that it was foul. We can assume that a note would have been made if it had been notably foul when the patient was in the hospital. The physical examination was remarkable because it did not show much of anything. The general condition was good, — somewhat against cancer, — and the lungs were normal; that is certainly not what we should expect in this case. There were no signs of consolidation, no diminished breath sounds, no moist rales and no musical rales. Outside the lungs, there were no palpable lymph nodes, no clubbed fingers and no source of emboli. We are left practically stranded on physical findings.

The laboratory findings help not at all except for three cultures that showed alpha-hemolytic streptococci. That may be of significance, although I should have been much more influenced by the demonstration of streptococci in smears of the sputum than in these cultures.

I shall now take up the x-ray films. I am not

so impressed with the "round tumor" as I had expected to be from reading the record.

DR. AUBREY O. HAMPTON: In this film, the lesion looks like a fairly round mass. I agree that the shadows in the other films do not look at all spherical. The cavity is not very plain. It is very small and irregular. The wall of the cavity is quite thick and irregular on the inside. This triangle is the only suggestion of bronchial occlusion. I believe it indicates pleural involvement. Otherwise, there is nothing in the lung to suggest a bronchial occlusion. The bones are normal.

DR. KING: This is the film at expiration, corresponding to this one at inspiration?

DR. HAMPTON: Yes; it does not show any air trapping or mediastinal shift.

DR. KING: Did the mass really decrease in size?

DR. HAMPTON: There was a reduction of 2 cm. in the diameter in the two-month interval.

DR. KING: This x-ray picture is not typical of anything.

Three things should be borne in mind, — cancer, tuberculosis and abscess, — and perhaps some other conditions, but these primarily. This case is not typical of cancer in my opinion. There was not the density of tumor or the sharply defined margin that one might expect. It is hard for me to accept the diagnosis of cancer. Furthermore, there is no evidence of bronchial obstruction that I can see anywhere except possibly the area that Dr. Hampton pointed out, which could be infiltration and not atelectasis. I am therefore inclined to throw out cancer but should not be at all surprised if the patient had it. I cannot, however, make the diagnosis. The x-ray film does not look like it. The story is possible for it.

This case is also not typical of tuberculosis. There was not the mottling of ordinary tuberculosis, and there was no suggestion of a tuberculoma that was breaking down in the center. The most certain thing about tuberculosis is its uncertainty, and this may have been some form of tuberculosis after all. One point against tuberculosis is that, with a six months' story of hemoptysis and x-ray observation for two months, the patient should have had a more typical cavity in the lung. It is my belief that it was not tuberculosis. The negative sputum does not rule out tuberculosis, in spite of the fact that the patient was raising sputum and should have shown organisms.

One has to think about abscess, of course, because of the mention of the foul taste of the sputum. There was no putrid abscess. To make it abscess, one must make it aputrid, on a streptococcal basis. We have one case that came to autopsy with a lesion much like this from which the pyocyaneus bacillus was recovered in pure culture. If one pays a great deal of attention to sputum cultures, streptococcus is a perfectly good bet. The nearest case in our series to this, as I see it, is one of a patient who was operated on for tumor, and the lesion proved to be a streptococcal abscess. The patient in the case under discussion also started with bloody sputum and was still coughing blood at the end of three months. I think a streptococcal process might carry on this way longer than tuberculosis; so that of the three main possibilities at the moment, I should vote for streptococcal abscess.

Another vague possibility is bronchiectasis. Dr. Hampton at one time claimed to be able to see dilated bronchi on the plain film.

DR. HAMPTON: I do not see any.

DR. KING: The location is unusual for bronchiectasis, and if one counts this as cavity in the middle of the lobe, one must assume involvement of the parenchymatous tissue as well as bronchiectasis. There might have been some bronchiectasis associated with the process, but it was not primary bronchiectasis. Other unusual infections suggested are blastomycosis and actinomycosis. There were no skin lesions and no chest-wall sinuses to go with such diagnoses; hence, there is no reason to think of them. Then, we have our old friend, lymphoma, which we shall think about and pass over. From the x-ray standpoint, we have seen the same picture, but the story is not like it, and I am willing to throw it out. Therefore, I should say that the chances are that this was a streptococcal abscess. I shall, with some disquietude, throw out cancer and tuberculosis.

The operation interests me. I assume that a lobectomy and not a drainage was performed.

DR. PAUL D. WHITE: I was visiting on the service when this man was being studied. The interesting point at that time was that in the beginning everyone, including the members of the Thoracic Clinic, guessed that the patient had a tumor of the lung. For example, Dr. Victor Balboni, on admitting the patient, believed that this was a bronchial tumor, probably adenoma, both by story and by x-ray.

DR. KING: I should like to mention adenoma. I meant to put it in the differential diagnosis. The persistent bleeding is consistent. There was no bronchial obstruction, however. If an adenoma had caused this bleeding there ought to have been atelectasis, and I therefore discard adenoma.

DR. WHITE: The first statement from the Thoracic Clinic was as follows: "We favor cancer as being more probable than a benign tumor. The

chances are that the growth may be beyond the reach of the bronchoscope. In either event, with or without positive biopsy, benign or malignant, exploration should be considered." As x-ray evidence developed, there was a shift of diagnosis by the members of the clinic to infection rather than tumor, and that, I think, was the status at the time of exploration. The fever, however, which was one of the features that developed, might, we thought, be explained by drug reaction.

DR. LOWREY F. DAVENPORT: We went all around the clock in the Thoracic Clinic, and when the case came to operation, the consensus was infection or tumor and, if tumor, either benign or malignant. At any rate, we took out the lobe.

DR. HAMPTON: Did you not rule out tumor on the basis of the reduction in size of the mass?

DR. DAVENPORT: As I said, we went around the clock, first favoring malignant tumor and then, following subsequent x-ray studies, abscess. We eventually decided to operate.

DR. JACOB LERMAN: It seems to me that as the mass reduced in size it became sharper. Could it not have been tumor, with secondary infection and obstruction?

CLINICAL DIAGNOSIS

Carcinoma of lung?

DR. KING'S DIAGNOSIS

Streptococcal abscess of lung.

ANATOMICAL DIAGNOSIS

Epidermoid carcinoma, bronchiogenic, left lower lobe.

PATHOLOGICAL DISCUSSION

DR. TRACY B. MALLORY: As Dr. King predicted, a lobectomy was decided on in this case, whatever the diagnosis might turn out to be. That was carried out by Dr. E. D. Churchill, and in the resected specimen we found a well-circumscribed epidermoid carcinoma, with a central cavity, 1.5 cm. in diameter, evidently the result of breakdown of the tumor tissue. All the walls of the cavity consisted of carcinoma. The tumor was exceptionally well differentiated. It lay fairly well out in the lung parenchyma, without demonstrable invasion of the hilar nodes, and this looks like one of the most favorable cases in the series for cure.

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ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The annual meeting of the American Medical Association was held at Atlantic City from Monday, June 8, through Friday, June 12. The gasoline and rubber shortage or fear of the dimout or that Hitler might take the opportunity to get rid of a few thousand physicians did not lessen the attendance or enthusiasm at the meeting. To be sure the boardwalk was not its gay and dazzling self at night, but it was colorful enough in the daytime.

Mr. Paul V. McNutt, administrator of the Federal Security Agency, was the principal speaker at the dinner given in honor of the officers and delegates on Monday evening. His remarks, somewhat misquoted in the daily papers, were forceful and pointed. He said that the Procurement and Assignment Service had been set up largely at the suggestion of members of the medical, dental and veterinarian professions and that these doctors constitute the only group that has been allowed to manage its own affairs in the emergency. He added that he hoped the Procurement and Assignment Service would succeed and that he and his associates would do all they could to keep it working. He admitted, nevertheless, that, up to the moment, not enough physicians had been obtained for the armed services and that if they were not forthcoming in the near future, some means other than the Procurement and Assignment Service must be utilized. His emphasis left no doubt as to his meaning. He addressed the House of Delegates in similar vein at its business meeting the next morning.

The meetings of the House of Delegates were, as usual, well attended and businesslike. There was some agitation to increase the size of the Board of Trustees from five to nine, on the theory that a considerable portion of the country was not represented. It was pointed out, however, that the Board of Trustees was not intended to be a representative body but was designed to conduct the business of the association and that small business boards are usually more efficient than large ones. The House of Delegates declined to authorize the change.

The resolution of the Massachusetts Medical Society regarding prepayment sickness insurance was presented, and the delegates voted to approve the provision of prepayment medical insurance on a medical-service as well as a cash-indemnity basis. The House of Delegates also authorized the Council on Medical Education and Hospitals to set up a program for refresher courses for physicians returning to private practice after the war, to bring them up to date in medical progress. This was accompanied by instructions to the Board of Trustees to urge military authorities to continue to pay full allowance to physicians who desired to take these courses.

The huge auditorium provided adequate space, not only for the scientific and commercial exhibits but also for the section meetings, the former continuing to grow in size and interest each year. All in all, the meeting was well up to its usual standards.

DEATH RATE IN INFANCY AND CHILDHOOD

During the past two decades, according to Dublin and Spiegelman,* child mortality in the United States has maintained not only a consistent but a spectacular fall. In 1920, for example, an infant mortality rate of 86 per 1000 live births obtained in the birth registration states of 1917; in 1929, this had declined to 66, and in 1939, to 44. That even greater improvement under continuing conditions of peace and relative freedom from epidemic disease might be expected is shown by the inequality of the general rate, ranging from a recent high of 109 deaths per 1000 births in New Mexico to a low of 37 in Connecticut, New Jersey, Oregon and Washington.

Although, on the whole, infant mortality is lowest in the north central and northwestern states, and highest in the South, it is interesting that Maine, of the New England states, stands alone in its membership among the states with the highest rates—over 50. New Hampshire and Vermont rank in the next group, with a 45 to 49 rate range, and Massachusetts and Rhode Island in the group with rates from 40 to 44. Connecticut is the only state in the most favorable group, with a rate below 40.

It is eloquent of the effects of civilization and economic advance, however, that during this period, for the first time in the history of the United States, an actual decrease in the child population has occurred. Such has been the decline in the birth rate that the number of children under fifteen years of age, which had risen from 33,600,000 in 1920 to 36,100,000 in 1930, diminished to 33,100,000 in 1940, or from 32 per cent of the total population in 1920 to 25 per cent in 1940. At the same rate, the number will have decreased to about 32,000,000 in 1960, or 22 per cent of the total population.

The improvement in child mortality, if not in total child population, is no doubt an index of the general rise in the standards of living, including improved benefits from medical science and public-health administration. It may be that the flood tide in the benefits that science can give to mankind has been reached: standards of living are going to be lowered; materials will be directed into other channels of production; scientific effort will be directed away from the paths of peaceful advance; personnel will be engaged elsewhere.

Greater effort than ever before will be required of those who can still participate in peaceful projects to hold fast to the ground that has already been gained.

*Dublin, L. I., and Spiegelman, M. The control of disease and death in infancy and childhood. *The Record* (American Institute of Actuaries) 30:28-57, 1941.

MEDICAL EPONYM

Politzer Bag

Dr. Adam Politzer (1835–1920), while *Docent* in otology at the University of Vienna, presented a discussion, "Über ein neues Heilverfahren gegen Schwerhörigkeit in Folge von Unwegsamkeit der Eustachischen Ohrtrompete [On a New Therapeutic Procedure in Deafness due to Blocking of the Eustachian Tube]," in the *Wiener medizinische Wochenschrift* (13:84-87, 102-104, 117-119 and 148-152, 1863). A portion of the translation follows:

> The seated patient holds a little water in his mouth . . . and is told beforehand to swallow it at a given signal. The instrument used consists of a straight or slightly curved metal tube shaped like a catheter; or better, a rubber tube of rather large caliber, connected with a pear-shaped rubber bag about twice as big as a man's fist. The physician, standing preferably at the patient's right side, inserts the anterior end of the tube 1.0 cm. into the proper nostril, compresses the ala nasi (so that no air can pass over the instrument) with his left thumb and index finger, and with his right hand vigorously expresses air from the bag into the nose while the patient swallows.

R. W. B.

MASSACHUSETTS MEDICAL SOCIETY

COMMITTEE ON MATERNAL WELFARE

CASE HISTORY: PREMATURE SEPARATION OF THE PLACENTA, FOLLOWED BY DEATH

A multipara was not seen until she arrived in the hospital when about six months pregnant. Her past history was essentially negative, and she had had no prenatal care. Her first four pregnancies had been normal, and all the children were living. She entered the hospital because of bleeding, which had started as a stain when in the tenth week of pregnancy and had continued off and on as a stain until shortly before hospital entry. Three weeks before admission, she had had a sudden profuse flow with clots, and had stayed in bed at home until she went into the hospital. On entry, she was flowing moderately and continued to flow sufficiently to require six or eight pads a day for the next two weeks and a half. No examination was made during this time, presumably because the pregnancy had not advanced to a point where a viable child was likely to be obtained and for fear of increasing the bleeding by examination. At the end of this time, the bleeding increased, and vaginal examination was done. This revealed no placenta previa, and by the process of elimination, a diagnosis of separated placenta was made. The following day, the membranes were artificially ruptured, the cervix and vagina were packed with gauze, and a Spanish windlass was applied. The next day, the baby and placenta were delivered. Since the placenta did not come away spontaneously, manual extraction was performed and was followed by very free bleeding. An hour and a half after the placenta had been extracted, 500 cc. of blood was administered. Since the bleeding increased, the vagina and uterus were packed with gauze, and a second transfusion was given. Finally, because of continued bleeding, an abdominal hysterectomy was performed, but the patient did not survive the operation. Autopsy showed a postpartum uterus with portions of adherent placenta.

Comment. The history of this case is rather unusual. Throughout the period of irregular flowing, medical advice was not sought until a frank hemorrhage had occurred. Delayed treatment in the hospital for the presumable purpose of securing a viable child was warranted. Furthermore, rupture of the membranes and packing of the cervix and vagina were undoubtedly the method of choice in a multipara at this stage of pregnancy when another hemorrhage demanded surgical intervention. Had the placenta been examined very carefully, it might have been inferred that the hemorrhage following delivery was due to pieces of placenta that remained after manual extraction. Although the record makes no mention of it, it is also possible that this adherent placenta was a true accreta, and had this been recognized, if such existed, at the time of manual removal, an immediate hysterectomy following the first transfusion might have prevented the fatality.

If this patient had been seen earlier in her pregnancy at the onset of bleeding, it might have been deemed wise to curette the uterus then. If this had been done, the fatality would never have occurred.

DEATHS

METIVIER — ARMAND O. METIVIER, M.D., of Chicopee Falls, died July 2. He was in his fifty-third year.

Born in Canada, he later went to Keene, New Hampshire. He graduated from St. Anselm's College and received his degree from the College of Physicians and Surgeons, Boston, in 1915.

Dr. Metivier was a member of the Massachusetts Medical Society and the American Medical Association.

His widow, a son, two daughters and four brothers survive him.

WILLOUGHBY — EARLE C. WILLOUGHBY, M.D., of North Reading, died June 23. He was in his sixty-first year.

Born in North Haverhill, New Hampshire, he received his degree from Tufts College Medical School in 1911. He served on the staff of the State Infirmary at Tewksbury until 1917, when he was transferred to the North Reading State Sanatorium. Soon after that, he was made assistant superintendent.

Dr. Willoughby was a fellow of the Massachusetts Medical Society and the American Medical Association. He was also a member of the Southern Middlesex Health Association, the Trudeau Society of America and the National Tuberculosis Association.

His widow and two brothers survive him.

MASSACHUSETTS MEDICAL SERVICE

WIDE INTEREST IN PLAN

All licensed physicians in Massachusetts may participate in the Massachusetts Medical Service, according to Dr. James C. McCann, the newly elected president. Since the public announcement of the launching of the new nonprofit system for the prepaid budgeting of medical care, the headquarters at 230 Congress Street, Boston, have been flooded with inquiries from physicians and laymen throughout the state.

"The chief query from the public," McCann states, "is, When will the service be available? The speed with which doctors participate is the only answer, although early September is our goal. While the first contract is limited to surgery, obstetrics and diagnostic x-ray service, all physicians are urged to pledge their support, even

if they are not involved in the first contract."

Because physicians are asking for more detailed information about the new nonprofit corporation, a series of articles has been prepared by the members of the Central Professional Committee. The first of these, dealing with the corporate structure of the organization, appears below. In the following weeks, the *Journal* will publish articles dealing with service contracts, compensation for professional service, the physician's relation to the corporation, the relation of the Massachusetts Medical Service to hospitals and the enrollment regulations of the plan.

* * *

The Corporate Structure

JAMES C. McCANN, M.D.

Voluntarily, the medical profession is altering its economic relations with the public through the establishment of the Massachusetts Medical Service, which is set up as a nonprofit corporation. Complete legal protection for the new endeavor is provided by the corporate structure.

Since physicians are placing control of many aspects of medical practice in the hands of a corporation, they may rightfully ask, How does the corporation function? It will function as does any business corporation. Members of the Executive Committee of the Massachusetts Medical Society constitute the voting members of the corporation and take the place of stockholders. The voting members elect the directors, who, in turn, are the corporation's managers. The voting members can remove the directors from office if there is due cause. The only other restrictions on the directors' powers are those specified in the by-laws, those arising from the state insurance commissioner's interpretation of the enabling act and the by-laws and those arising out of recourse by any party to the courts.

Security of Physician

It is vital that medical standards relating to the welfare and the rights of physicians be protected when they become involved with the legal complexities of a corporation, and that there be professional supervision of the purely medical aspects of any such plan. This supervision is guaranteed by the fact that the voting members are, themselves, physicians representing the profession of the entire state.

As described in the June 18 and July 2 issues of the *Journal*, the directorate of the Massachusetts Medical Service numbers fifteen members, representing equally physicians who have direct contact with the medical profession through the local professional service committees in the districts, eminent laymen whose practical experience is of great value and outstanding representatives of the subscriber groups.

Vital medical matters might be mishandled by such a composite corporation were it not for the organization and the functioning of the Board of Directors, which is broken into committees assigned to specific tasks. The Executive Committee takes responsibility between the meetings of the entire directorate. The Financial Committee guards the funds and investments. The Actuarial Research Committee compiles data that protect physicians through a sound actuarial procedure. The Interlocking Services

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It is vital that medical standards relating to the welfare and the rights of physicians be protected when they become involved with the legal complexities of a corporation, and that there be professional supervision of the purely medical aspects of any such plan. This supervision is guaranteed by the fact that the voting members are, themselves, physicians representing the profession of the entire state.

As described in the June 18 and July 2 issues of the *Journal*, the directorate of the Massachusetts Medical Service numbers fifteen members, representing equally physicians who have direct contact with the medical profession through the local professional service committees in the districts, eminent laymen whose practical experience is of great value and outstanding representatives of the subscriber groups.

Vital medical matters might be mishandled by such a composite corporation were it not for the organization and the functioning of the Board of Directors, which is broken into committees assigned to specific tasks. The Executive Committee takes responsibility between the meetings of the entire directorate. The Financial Committee guards the funds and investments. The Actuarial Research Committee compiles data that protect physicians through a sound actuarial procedure. The Interlocking Services Committee supervises the relation of the two independent but jointly functioning corporations — Massachusetts Medical Service and the Blue Cross. The Central Professional Committee has power to initiate action for the Board of Directors on all vital medical matters, submitting complete medical data as a basis for any action by the board. In effect, the last committee serves as a medical advisory committee to the directorate. Furthermore, any anticipated action by the Central Professional Committee must be reported to the voting members, thirty days before action is taken, and the latter can send resolutions and recommendations to the directors. This assures to the representatives of the profession full knowledge of anticipated action by the directors on medical matters. Such facts will also be available to the Council of the Massachusetts Medical Society, whose resolutions or recommendations to the voting members would carry impressive weight.

The medical profession of Massachusetts is privileged to have serving on the directorate some of the most eminent nonmedical leaders of the state. These men are serving without compensation, because of a sense of responsibility to the public, and have accepted a trusteeship that will require much of their time and expert judgment. Remembering that the corporation is not an insurance company but strictly a corporation formed by them to solve current problems in medical care, physicians are greatly indebted to these civic-minded lay directors.

Opportunity for Plan

Massachusetts Medical Service, established after long years of study and based on the experience of other medical-care plans throughout the country, has the opportunity of meeting changing conditions and, at the same time, of preserving basic freedoms. Patients retain the freedom of choice, and physicians retain the freedom to serve. Through this new corporation, the medical profession of Massachusetts can satisfactorily meet the challenge of the times.

WAR ACTIVITIES

CIVILIAN DEFENSE

Aids to Decontamination

The following letter has recently been released by the Office of Civilian Defense, Washington, D. C.:

> Decontamination stations should be of simple construction with ample facilities for disrobing, bathing and chemical neutralization. Persons contaminated with liquid vesicants must be treated within five minutes to avoid severe burns. Complete preparations therefore require that facilities are sufficiently numerous so that every individual is within five minutes walk of a decontamination station. Gasoline filling stations are widely distributed and may be adapted for this purpose.
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> Suggestions for adapting gasoline filling stations for decontamination are as follows:
>
> 1. Use stations with washing and greasing facilities under cover.
>
> 2. Establish a temporary disrobing area outside and adjoining the washroom, shielded by canvas, parked automobiles or some other device providing privacy. Allow abundant natural ventilation. Everyone entering the disrobing area must walk through a box of sand and bleaching powder to decontaminate his shoes (three parts of sand to one part of bleach containing 30 per cent hypochlorite).

3. Provide a gas lock to the washroom, with a foot bath of bleach slurry of sodium hypochlorite solution.

4. Install temporary showers or improvise a pipe with several outlets for multiple bathing. Use hoses operated by attendants for washing large numbers of people. Supply soap.

5. Eyes should be irrigated with soda near the entrance of the washroom, or hosed gently with plain water in the event of large numbers.

6. Use grease room for dressing.

7. Partition off the grease room from the washroom with wall board or other temporary material, if the rooms are not already separated.

8. Provide a gas lock between the washroom and the dressing room.

9. Use the station office or the ladies' rest room for first aid, if necessary.

10. It is advisable to ventilate the wash and dressing rooms by means of ordinary cooling fans blowing out of the windows.

11. Supply numbered paper, burlap or cloth bags for each person's clothing, and record name and address opposite the number.

12. Keep contaminated clothing outside the station, and place bags of clothing in covered metal containers until decontaminated.

13. Provide a supply of clean clothing of assorted sizes in the dressing room.

14. Apply bleach or sodium hypochlorite solution, such as Chlorox, Zonite and so forth as indicated for liquid contamination either in the disrobing room or washroom.

15. It is advisable to paint wall board, wood, concrete or brick with sodium silicate paint to prevent persistent contamination.

16. Consult the Office of Civilian Defense publications, *Protection Against Gas*, and *First Aid in the Prevention and Treatment of Chemical Casualties*, for detailed instructions.

The organization and direction of decontamination services for persons is under the Emergency Medical Service. Decontamination of uninjured persons may be assigned by the chief of Emergency Medical Service to the local health department. Stations for decontamination of persons may be operated under the supervision of public-health nurses where physicians are not available. Decontamination of food and water supplies should be assigned to the local health department.

CORRESPONDENCE

TREATMENT OF PATIENTS SUFFERING FROM DIETARY DEFICIENCIES AND PROLONGED EXPOSURE

To the Editor: I have just seen a perfectly extraordinary situation about which I think something should be done, although I am completely at a loss how to proceed.

A thirty-two-year-old sailor just came to my office because of excruciating pain in his legs, for which he wished some morphine. One month ago he was on a boat torpedoed off Cape Hatteras. For thirteen days, he was in an open boat, with nothing to eat except hardtack and water. Nine of his companions died before the others were picked up a hundred miles offshore by a coastguard boat. All the ten who were saved had enormously swollen feet and legs, and most of them said they felt "dead below the knees." Their bodies were covered with "salt water boils," and the skin of their hands and feet was soft and white from constantly being soaked in salt water.

The rescued men were taken to a hospital in Delaware. They were put on a light diet, consisting of milk as often as they wished, one egg a day and one small portion of meat a day; they had all the fruit they wished. The first two or three days they had contrast baths, and then they were started on suction treatment with a glass boot, forty minutes a day, for their swollen feet. They received no brewer's yeast, liver extract or other vitamin preparations, either parenterally or by mouth. Some, including my patient, received sulfanilamide because of furunculosis.

After two weeks of this treatment, my patient decided to leave the hospital, as he was not getting any better. The physicians there told him there was nothing that could be done for his painful legs except the boot treatment and eating a lot. They also said that no other treatment was being used anywhere along the Atlantic seaboard, where so many similar cases are being treated in the hospitals along the shore.

My patient is still some 18 to 20 pounds below his weight of a month ago and has absent vibration sense below his ankles, that is, over both feet. He has no paresthesia above the ankles but complains bitterly of a dull aching pain in the bones of his feet.

I do not believe there is the slightest doubt that he will eventually have practically complete clearing of all his paresthesia on nothing but an average diet. It seems pretty inexcusable to me, however, to treat men suffering from acute vitamin deficiency with contrast baths and a suction boot without any vitamin supplement orally or parenterally.

My particular patient being relatively young is probably going to get by without any permanent damage from the treatment he received, but I wonder if something should not be done to wake up the medical men responsible for the care given in these hospitals.

DUDLEY MERRILL, M.D.
51 Brattle Street
Cambridge, Massachusetts

REPORT OF MEETING

HARVARD MEDICAL SOCIETY

A regular meeting of the Harvard Medical Society was held at the Peter Bent Brigham Hospital on March 10, with Dr. James P. O'Hare presiding.

In a case presented by the Surgical Service, a seventeen-year-old boy entered the hospital half an hour after receiving second-degree and third-degree burns of more than half the body surface in a gasoline explosion. The area was immediately cleaned and débrided in the operating room under Pentothal anesthesia. An eschar of tannic acid and silver nitrate was applied to the flat surfaces and *tulle gras* to the areas where motion was advisable. During the first ten hours, the patient was given enough albu-

min and plasma in 12,000 cc. of fluid to equal 8000 cc. of plasma, yet the hemoglobin concentration remained at double its usual value. After twenty-four hours, the face, neck and tongue began to swell dangerously, and multiple Z incisions were made in the neck to relieve the severe constriction. The patient gradually improved and received decreasing amounts of parenteral fluids until the sixth day, when he was able to maintain himself by oral feedings. The burns remained nonseptic, and after several weeks, epithelialization began in several areas.

In discussing the case, Dr. Charles A. Janeway stated that the 100 gm. of albumin, which equals 2000 cc. of plasma, was just sufficient to maintain daily equilibrium at first. The parenteral use of crystalloids not only is disadvantageous but may actually be harmful in that it may increase hemoconcentration and further deplete the plasma protein. This patient, as a result of the albumin therapy, finally reached a state where the total protein value, although normal, consisted of practically all albumin and no globulin. The value of the latter component for many vital substances, notably vitamin K, makes it advisable to change to plasma therapy at an early stage in the treatment of prolonged protein loss. The elevated nonprotein-nitrogen level encountered in this case and other cases of severe burns may be attributable to increased tissue destruction or the hypothetical toxins elaborated in the burned areas. It should be noted, however, that plasma, especially the commercial product, contains appreciable amounts of Merthiolate, which is toxic because of its mercury content. The cost of such therapy is about $35.00 for 1000 cc. of plasma.

Dr. Elliott C. Cutler, the speaker of the evening, reminded the group that it would require 16,000 cc. of blood merely for the first few days' treatment of this single patient, and therefore questioned the practicability of blood banks as a means of combating mass shock, unless such banks can be conducted on a grand scale. Tanning of burned areas is acceptable and probably preferable on flat surfaces, but is definitely contraindicated where there are creases, where the part is mobile or where an entire circumference is involved, when an eschar may cause interference with circulation or choking, as in the case presented.

Dr. Cutler discussed "The Medical Aspects of Civilian Defense." In emphasizing the need for immediate perfection of home defense, it was pointed out that the United Nations have so far guessed wrong on practically every major move on the part of the enemy, and that our only protection is an all-out preparation. We may even sustain gas attacks, which were abandoned in the assault on England only because of the fear of retaliation. Scrutiny of the trained personnel on hand and the estimated number needed makes it apparent that there is no inadequacy in this respect.

Dr. Cutler reviewed the map of Massachusetts, with its defense regions. Region 5, including Greater Boston with its two million inhabitants and the majority of defense plants, has about 50 per cent of the entire population. The regional organizations are capable of working independently of the central committee. The deputy regional medical officers represent the various medical societies, and these men must therefore be free to work at any time. Dentists are also needed for this purpose, for exact information may often be essential in either medicine or dentistry at the report centers. Hospital superintendents are also being placed in a similar role for organization of institutions.

Cities and towns have their own medical committees, which follow a general plan of organization and action so that the entire group may be integrated in the event of a widespread incident. There are first-aid posts, ideally composed of duplicate units, each with two physicians, two nurses, four nurses' aides and four men trained in first aid. Secondly, there are the first-aid parties comprising lay people, preferably trained in ARP schools and Red Cross courses. In general, it is strongly urged that all the members of all special groups, such as first-aid, wrecking and public-utilities parties, attend an ARP school before taking their postgraduate training in their specialty. Although transportation worries the general population, it is in reality relatively simple. Hospital administration, however, entails a problem. It is necessary to fulfill the requirements of the Governor's proclamation regarding blackouts while attempting to adhere to a strict budget. It is suggested that money not be wasted on unessential embellishments. Plans have been made for the use of certain institutions as base hospitals in the event of bombings in metropolitan areas, but no promise can be given that evacuation from a given place will be to a certain base hospital.

In addition to the central executive committee, there are subcommittees on base hospitals, on the medical aspects of evacuation, of medical examiners, of dentistry, of public health, of liaison with the Red Cross and with the Protection Division, and on pharmacy. The last group has donated all the necessary pharmaceuticals. Certain drugstores have been designated as auxiliary first-aid supply depots, but they must pass certain requirements.

A brief sketch was given of the course of events if an incident occurs: the role of the interceptor command, which ranges three hundred miles to sea; the meaning and scope of the blue, yellow and red signals; and some of the intricacies and major duties of the many report centers scattered throughout each section. In many of the smaller towns, the medical supply depot, Red Cross depot and casualty station are located together in some central public building, which may also be the report center. The casualty station serves to relieve congestion in necessary hospitals by caring for minor wounded and ambulatory patients. When an incident occurs, mobile medical units (medical first-aid posts and lay first-aid parties) are dispatched to the site by ambulance. The former group sets up the post in some appropriate house or building nearby and determines, according to the extent of the incident, what cases may be treated there and what cases should be transferred to hospitals. These are first sent to emergency hospitals and are then transferred to base hospitals if evacuation of the former becomes necessary.

During the discussion it was emphasized that sulfanilamide powder may be full of spores and is not self-sterilizing. This fact also makes its sterilization in containers difficult, but this has finally been overcome, and the drug is now dispensed in individual sterile containers.

BOOK REVIEW

Roentgen Technique. By Clyde McNeill, M.D. Second edition. 8°, cloth, 329 pp., with 276 illustrations. Springfield, Illinois: Charles C Thomas, 1941. $5.00.

This book is clear, concise, well diagramed and thorough, especially in its discussion of x-ray technic of the skull. It is a good handbook for roentgenologists and technicians.

(Notices on page viii)